THE

ADDRESS IN MEDICINE,

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IT is well that we should sometimes ask ourselves, with regard to the special sciences to which we devote our lives, the questions—Whence have we come? and whither are we going? And this has been obviously felt by those who, in directing the affairs of the British Medical Association, ordained that there should be an annual Address in Medicine.

We can appreciate the nature of our present position only by a regard to the past and an outlook towards the future. If we would know what the present condition of Medicine or Pathology really is, we must see whence it has come, and whither it is tending; inasmuch as a reference to the past is necessary for the comprehension of work that is in progress now; and a glance towards that which is to come, and which must be the outcome of our present work, is also essential, if we would test its truth or attempt to measure its value.

If Linnæus asked like questions about Man, with an outlook into regions which have not as yet been drawn within the limits of exact science, we, too, in our review of Pathology, must sometimes pass beyond the lines within which that science has, perhaps, too often been confined, and by which it has been sometimes cramped. Medicine is no isolated science: we cannot draw a line around the group of facts which we so denote—nor, indeed, around any group of facts—in such fashion that we may truly say, that within its enclosure the whole of any one science lies, and that outside such enclosure all facts must receive a different name. The whole of any one science is the whole of all; and pathology has its biological, chemical, physical, and mathematical elments, on the one hand, and its mental, moral, and social bearings, on the other.

In the somewhat perilous task that I have set before myself, it is not my intention to attempt to furnish an account of the details of recent scientific work in medicine; but rather, by an examination of our past and present relations to four great propositions or (if I may use the term) articles of creed, to show how they have affected our modes of investigation in the past, how they are governing and guiding our labours now, and what are the results which we see coming from the now existing and prevailing tendencies of thought.

The four articles of creed to which I refer as influencing, for good or for evil, the progress of scientific pathology, are —a belief (1) in life; (2) in man; (3) in individuality; and (4) in the specificity of disease. The relation of the worker to the notions entertained by him with regard to the facts connoted by each of those four expressions must determine the character and bearing of his work; and it is my object to try to bring before you the nature and effects of that relation.

I. Those who have gone before us in the study and treatment of disease have held, and that very strongly, to a belief, first, in life—i.e., in a power, force, or condition of matter which was *sui generis*; which could not be explained away; which could not be referred to any combination of physical powers; which had an origin the nature of which was beyond the reach of our modes of investigation; the career of which was, although often "sorely let and hindered," outside of and above all temporary and material obstacles; and the end of which, as we see it here, was but the beginning of another development, for the features of which we must patiently wait until we ourselves had passed into another state of being.

It is obvious that this view of life often led investigators of disease away from objects which they should have examined; drove them into conditions of thought which were fatal to a correct appreciation of the truths they wished to know; cramped their notions of the possibility of preventing or curing sundry affections of both mind and body; and perverted the efforts which they did make for the alleviation of ills they could neither arrest nor remove.

Some of the names of familiar diseases point to the nature and key-note of the pathology of the times in which they were first applied, and illustrate the first point that I have mentioned. The terms "morbus sacer," "morbus comitialis," "morbus sancti Weitii," the "king's evil," "St. Anthony's fire," and the like, conveyed meanings that are now happily lost to science. The affections thus denoted were only a few of many which it was profane to attempt to account for by other than occult and mysterious influences upon the greater mystery of life. The investigator was driven back and away from thoughts or processes of examination which should intrude into these secret places of the unknown.

Again, the notion that life-processes were totally dissimilar from all physical and chemical changes, so that the life-force held all these changes under its own control, effecting, by its direct agency, movements both coarse and molecular, such as bore no relation whatever to the results of well-known chemical and physical forces, led the minds of the most earnest thinkers away from the proper track of scientific and legitimate research, and placed them in a condition of hopelessness and confusion such as nothing but a strong and, perhaps, excessive revulsion could remove.

Diseases which were held to be the result of some direct interference with the higher processes of life, such as insanity of mind and many of the disturbances of motility and hallucinations of the senses, were maltreated or untended, except by incantations or the administration of some mineral, vegetable, or animal substances selected on no observation of their real therapeutic effects, but simply upon some mystic ground, some tradition, fable, or dream. And, again, the efforts that were made, within what was held to be the legitimate region of therapeutics, were misdirected and limited by the notions of volitional opposition to be overcome, not only in the patient, but in this organ and in that; and the processes directed to overcome this resistance were often absurd, and sometimes worse.

A change has passed over all this mode of thinking; processes and phenomena which were held to be among the sacred mysteries of life have been shown to be facts of chemistry and physics—facts which can be recorded by figures, words, and drawings. The chemistry of digestion, of assimilation, of secretion and excretion, has been pursued and unravelled with scrupulous care and marvellous exactness. We have learned something of the rate of movement of nerve-change; of the nature and mode of the operation of impressions on the organs of special sense; of the conditions of muscular contraction; of the relation between definite movements of the limbs and certain portions of the brain; and, indeed, of many curious links between some of the higher processes of thought and special portions of the nervous centres. Diseases have been produced by artificial means; one disease has been used to destroy another, and vaccination has done much to diminish, and may probably succeed in eradicating, small-pox; diseases have been removed by chemical processes, both directly and indirectly; the diabetic process has been controlled by a diet-rule; sarcinæ have been killed by sulphurous acid; and electrical appliances have restored wasted muscles and inactive nerves when these were apparently beyond all reach of hope. Modern pathology, by the aid of the microscope, the test-tube, and other means, has read many of the secrets of life, and the physician has been able so to wield the forces of life as to set right much that was wrong, and bring back the functions of organs which were virtually dead.

But, granting that we have removed much of the traditional mystery which obscured the facts of life, that we have resolved many so-called living actions into chemical and physical processes, and have described them in other than "vital" terms, it may still be questioned whether or no we have advanced many steps in the solution of the ultimate and real mystery of life. The tendency of the present day is to believe, and act upon the belief, that we have done so, and, as it seems to me, to push aside awkward facts as irrelevant or unreal, and to smother questionings by representing them as either solved, insoluble, or worthless. It seems to be almost believed by some that if the

chemical elements of which organised and living beings consist are brought together under favourable conditions, they arrange themselves into vital forms and execute vital functions; and just as certain bodies in solution may assume definite crystalline form, so other bodies may agglomerate into organic form and exhibit the properties of life. Again, the obvious "correlation" of the physical and vital forces has led some to believe not only in the correlation of forces and actions, physical and vital, but, further, in the identical nature of the two; and so that which constitutes the true differentia of life appears to me to have been lost sight of in the very brightness of the light which has been thrown upon the conditions of its action. It is well known that heat, electricity, light, air, food, and other external physical forces, impressions, and materials, are the agents by which the processes of life or vital actions may be educed, and without which they fail to show themselves, but when the idea is entertained that life itself is nothing more than an aggregation of the resultant movements of these conditions, materials, and forces, it seems to me that we are wrong. Impressions from without may determine the occurrence of motion or sensation, but the secret of life is still hidden in the organism which transmutes the one into the other. Physical force may be correlated to vital acts, but life itself is the special property or condition of the special material which effects that peculiar relation, and it is as far from comprehension now as it was a thousand years ago. Heat applied to a fertilised and "living" egg may set in motion all those chemical and physical changes and movements which make up the living processes of a growing bird; but if the egg be not living to begin with, heat but hastens another series of chemical changes—those of disintegration, putrefaction, and decay. Life is still hidden in the wonderful cells from which all these changes of structure and function take their start. Again, if we apply electricity to a nerve-trunk, a cerebral convolution, or a more central structure of the brain, motions of definite character, association, and sequence may result; but the secret of life still lies hidden in the properties of those nervous elements which transmute such electrical impressions into the facts of muscular contraction and association of muscular contractions in the movements of the limbs. To illustrate my meaning here, let me remind you that every so-called chemically "elementary body" is known as such only by the power which it possesses of so modifying materials and forces with which it is brought into contact as to be distinct in its sum of properties from every other elementary body. We can describe it only by terms which involve some facts simpler than those of chemistry; but the idea is irresistible that, e.g., gold, silver, and lead differ from one another in the fact that each of them has in itself a "something," we know not what, which determines the various bearings of each of those elementary bodies under the varying conditions to which they may be exposed—a something which makes them what they are, and to which we unconsciously refer in thought when we give them names and places in scientific categories. This individuality, or tendency to "individuation," as it has been called, is what constitutes that which has been termed their "life." The same mode of thought is true with regard to the living organic body, no matter how simple or how complex: that which makes it living, which alone justifies the attribution to it of the properties of life, is the possession of an individual power of behaving in such a way under given circumstances, and amidst the brunt of conflicting forces, and surrounded by varying materials, that it evolves the phenomena we designate as vital.

I do not mean to say that anyone distinctly says to others, or even to himself, "I can make living beings by putting together the elementary bodies of which they are composed under favourable conditions"; nor do I think that there are many who would say, "Life differs in no respect, in all its details, all its relations to personal consciousness, to moral sense, to intellectual product, and to social history, from the physical forces of which we know so accurately their modes of action as to be able to foretell the result of experiments we may make, or of processes which we see advancing"; but I do think this, that many are disposed to think that, if we could make our experiments only a little more clever, that if we could carry our machinery of experimentation but a little further—and there is no doubt that we shall do so very shortly,—we shall get rid of the term and the idea of life itself, and so make a great advance in science. It may be that this will be done; but, for one, I believe that it will not be done; but that there will ever remain the same kind of mystery with regard to life itself—however keenly and satisfactorily many of its processes may be referred to simpler agencies—that still shrouds the nature of those simpler forces, such, for instance, as gravitation or heat, with regard to the nature of which we have ceased to question. We have admitted that their "essence" is beyond our ken, and that we can but study their phenomena; we have not tried, or have failed if we have tried, to reduce them to a common denominator; but, with regard to life, we have drifted into a sort of belief that it is to be decomposed, explained away, or got rid of; and that our true line of action is to be found and followed by such a belief in the future results, rather than in the present or the past facts, of science.

The mode in which this state of mind affects us, as physicians and surgeons, is, I think, injurious. Among other evils which come from it, I will mention two. The first is the growing disregard of what may be termed "subjective symptoms" of disease, and the second is the effect which such frame of thought exerts upon therapeutics.

With regard to the former—"subjective symptoms"—is it not coming to this, that but little attention is often paid to the accounts which patients give us of themselves, their ideas, emotions, feelings, and physical sensations? These are things which we cannot weigh in our most guarded balances, measure by our finest scales, split up in our crucibles, or describe in any terms save those which are peculiar to themselves, and which we cannot decompose. These symptoms are often disregarded and set aside, and the patient, whose story of disease is made up of them, is thought fanciful, hypochondriacal, hysterical, nervous, or unreal, because, forsooth, we have physically examined thorax, abdomen, limbs, and excretions, and have found in them nothing wrong; because we have looked at the retinæ, examined the limbs electrically, traced on paper the beatings of the pulse, weighed the patient, and have not found him wanting. Still he is miserable, in spite of placebo and assurance that there is "nothing organically wrong." There may be in him the consciousness of a deep unrest, or of a failing power, which he feels, but which we cannot see, or of a something worse than pain—a sense of "impending evil," that he is conscious of, in brain or heart; a want of the feeling of intellectual grasp, which he may call "failure of memory," but which memory, when we test it, seems free from fault; a want of the sense of "capacity for physical exertion," which seems, when we see him walk or run, to be a mere delusive notion, for he can do either well and easily to our eyes and those of others; and so he is called "nervous," and is told to do this or that, and disregard these warnings, that come to him from the very centre of his life. And let me ask whether or no it has not again and again happened, in the course of such a history as that which I have only faintly sketched, that some terrible catastrophe has occurred? Do we not see minds gradually breaking down while we say there is no evidence of organic change in the brain; hearts suddenly ceasing to do their work, when, after careful auscultation, we have said there was nought to fear? Suicide or sudden death sometimes disturbs the calm surface of our scientific prognosis of no evil; we may be startled, and may then see all that we ought to have seen before. But when the ripples that such unforeseen events have occasioned on that smooth surface have subsided, we go on as we have already done, and still pay but little attention to what the patient feels, and delight ourselves in the precision of our knowledge with regard to physical conditions of which he may know little and may care still less. No one can appreciate more highly than I do the value of precise observation, but I do not believe that minute, delicate, and precise observation is limited to a class of facts which can be counted, measured, or weighed. No one can see more distinctly than I do the wrong conclusions at which a physician may arrive by accepting as true the interpretations which fanciful patients may offer of their symptoms, but I am sure that if we pay no heed to these mistaken notions of a suffering man, we lose our clue to the comprehension of the real nature of his malady. Morbid sensations and wrong notions are integral parts of the disease we have to study as a whole, and we are bound to interpret their value for ourselves; but we can ill afford

to set them aside, when we are as yet but in the dawn of scientific pathology, and are endeavouring to clear away the obstacles that hide the truths we hope hereafter to see more clearly about the mystery of disordered life. The value of such symptoms may be slight in some kinds of disease when compared with that of those phenomena which may be directly observed, but we are bound to remember that there are many affections of which they furnish the earliest indication, and there are not a few of which they are throughout the only signs.

Again: the view that is taken of the correlation of vital and physical forces, when it assumes the form that I have mentioned, and which amounts to a practical ignoring of the fact of life, is, I think, mischievous in therapeutics. That which is the differentia of life is, as it seems to me, lying in the organism, and is that which makes it capable of transforming physical forces into vital acts. But what we are often attempting to do in our treatment of disease is to elicit vital action, rather than to conserve vital force. We see that, by giving such and such drugs, we change—and, as it seems, for the better—the mere processes of life; we may limit or increase muscular movements; we may augment the quantity of secretion here, or of excretion there. But, let me ask, do we not often see that, when we have effected these changes, when we have given diuretics, purgatives, diaphoretics, and the like, and have witnessed their appropriate physical results, the disease is no better than before, and the patient is worse? We have brought vital processes into play, but have used up the vital force in doing so. On the other hand, we try to check what appear to be excessive and exhausting discharges, or tiring and distressing acts; we try, and often succeed, in diminishing the frequency, force, or extent of certain vital functions that appear to be, and indeed are, beyond the normal range. But, again let me ask, do we not often see, when we have succeeded in lulling a cough, and diminishing the amount of expectoration, that other and far graver troubles supervene; that, when a diarrhœa or diuresis has been cured, the patient is worse than before; that when a skin-eruption has been removed, some nervous trouble takes its place? Again, by the administration of alcohol, or of other stimulant or tonic, we may often help a man to get through some work for which, without such aid, he was totally or partially incompetent; we have evoked an amount of vital action that would otherwise have been impossible. But do we not often see that we have really done more harm than good; that the weakness has increased, and that the necessity for stimulation has become aggravated, and that what was really needed was food and rest, which should have nourished the organism, built up the tissues, and replaced what was wanted in living force? We have helped our patient to do things he could not otherwise have done, but we have used up his life in doing so.

Once more: in the present day, electricity, in its many forms, has come again into fashion, and constant and faradaic currents, chain-batteries, and magnetic belts are topics of common conversation and articles of dress in boudoirs and clubs, as well as in the consulting-room of the physician. The mischief that is being done by such abuses of a very valuable therapeutic agent is grave and manifold; but is the profession altogether blameless in this matter? There are some conditions in which electricity is very useful, and useful by calling into play the function of nerve and muscle; but it has again and again been used when it could by no possibility have been productive of the slightest advantage, and when the production of such enforced action of muscle and nerve has but diminished the strength and exhausted both the energies and the endurance of those who had not one grain of either of those qualities to spare. Muscles and nerves have been driven into action when they needed rest; but that which has guided the practitioner into such mistaken practice has been the notion that to evolve function was the great end of treatment, whereas what was really needed was a conservation of the central nutrition, and a consequent addition to the stock of vital force. Rest, food, cod-liver oil, and soothing drugs were needed; and not faradisation, alcohol, or strychnia.

These points are enough to show the class of evil which may arise from what I hold to be a wrong way of putting the notion of the relation between physical and vital force, between life and vital function; and I cannot but think that, by a review of our ideas of life, and by a regard to the objects, direction, and limits of our therapeutic agents, we may hereafter find it less frequently recorded in the domestic annals of our patients, that he or she had "suffered many things of many physicians, and was no better, but rather the worse."

As ancillary to the line of argument which I have followed, there is much to be gathered from a regard to the recognised causation or etiology of disease. The conditions which derange or disturb health may be grouped in the following manner:—1. Those which change the due income to the body of ponderable, measurable, intelligible, and appropriate material, such as food in all its forms, solid, liquid, and gaseous. These may be deficient, excessive, or unwholesome; and we know fairly well the results of bad eating and drinking, of bad water and bad air. 2. Those which interfere with the due elimination from the body of its waste products—faulty secretion and hindered excretion. 3. Those which diminish, derange or exaggerate the amount or influence of certain imponderable agencies—light, heat, electricity, and the like; and here, too, I would place physical injuries. 4. Those which in any way disturb the due exercise of the body in such way as to distort the balance between income and expenditure of these imponderables—for example, overwork, underwork, deficient motion, deficient rest, care, anxiety, and toil.

I do not know what recognisable and ascertained cause of disease might not be included within one or the other of these four categories; and by their aid we may explain a vast number of the morbid conditions which we have to study and to treat. But let me ask if, after the most careful scrutiny, we are not again and again compelled to say we can find no cause for the particular malady presented to us in this person and in that? We fall back upon constitution, predisposition, hereditary taint, and other easily employed but most inadequately examined and utterly uncomprehended words, to account for what we do not know and can by no means explain; and by the use of such phrases we only shunt the etiology into a siding, or throw back for one or two generations that which is inexplicable in the present.

We know much of the conditions determining the occurrence and favouring the development of the "acute specific diseases." We know much of the results of accidental exposures, of overwork, of faulty education, and of miserably defective hygiene. We know something of the conditions which may aid the growth of the group of "constitutional diseases," and which may antedate the processes of natural decay. We know much that may be useful in its application to masses of people; and to this I shall refer hereafter. But what, let me ask, do we know, and know definitely, of the starting-point of disease, of so-called "constitutional" sort, in a large proportion of the cases that come under our care? It is worse than idle to assume that we know as yet the true etiology of cancer, of Bright's disease, of tubercle, of Addison's disease; or, again, of that which determines the difference between the many maladies of the nervous centres which crop out in writer's cramp, torticollis, chronic chorea, locomotor ataxy, epilepsy, diffused sclerosis, or general paralysis. We often lightly refer any one of them to conditions common to the causation or supposed etiology of all, and then fall back upon peculiar predisposition. Again, do we not often find that, upon the most careful scrutiny of all antecedents, we are unable to explain why this man has Addison's disease, and that suffers from ataxy, why one suffers from cancer, and another from writer's cramp? There is much that is as yet withheld from our most earnest gaze—much that, as it seems to me, we must as yet refer to a change, the nature of which we do not know, in the very innermost recesses of what we call "life." There is something radically and essentially wrong in that upon which all these so-called "causes of disease" are brought to bear; and I think we are driven by the facts of daily experience to believe that the organism—the living material which, by virtue of its own endowments, determines, in obedience to external impressions, all vital acts—is in itself at fault; and that its departures from the normal condition vary, and are different the one from the other, in such a way as to produce those various modifications of structure and function which we term "constitutional diseases." As physicians and surgeons, it is our part to conserve life by preventing, when we can, the inroad of disturbing agencies; to preserve life in its in-

tegrity of useful work and fit association with all that makes life happy; to help it in its weakness, heal its suffering, lessen its sorrows, and soothe its closing hours; but I think we shall accomplish these purposes successfully only by admitting its existence, its separateness from all other forces, acknowledging its mystery, bowing ourselves down before the enigma of its origin, and reverently humbling ourselves in face of its unsearchable but wonder-teeming end.

II. In continuing our review of the past and observation of the present, let me next remind you that the fathers and forefathers of pathology held a firm belief in the essential peculiarity of man. They believed that man was a creature in many respects allied to and resembling other members of the animal kingdom, which was, or had been, brought into more or less complete subjection to itself, but presenting points of difference from all the so-called lower forms of life far greater in their intrinsic value, although, perhaps, far less in their numerical representation, than the points of agreement or resemblance. Thus, and for this reason, the maladies of man had an appearance and received a consideration which could be understood and justified only upon regard to a belief in the entire separateness of man's life and history—in its origin, its purpose, and its end—from that of the most elevated and most familiar members of the animal kingdom.

The effect of such teaching was to set a limit to the acquirement of certain classes of knowledge which might be highly useful to man in regard to many of his bodily ailments; and not only so—it led to an entire misapprehension of many facts that were of constant occurrence in the healthy and unhealthy lives of men. Actions which are common to man and the animal races, actions of simply reflex character, of sensori-motor or of emotional origin, in addition to all those which were regarded as intelligential, were separated by a broad line of distinction from all similar actions occurring in the most gifted animals. This being so, the attempts which were made to explain such phenomena in man had their starting-point, not in physiological method, but in metaphysical speculation. Animal life, in its various outgoings, was abased that man might be exalted: the term "instinct" was rarely applied to the latter; the possession of reason was denied the former. And, in the present day, we constantly hear, on the one hand, of the remarkable "instinct" of the dog, for example, as an explanation of some distinctly intelligential process; and, on the other hand, we hear many facts and functions of human life described in terms of intelligence, while they are in reality examples of but instinctive impulse, sensori-motion, or reflex action. It would seem, from what we often hear, as if the idea prevailed that instinct grew up into wider and more complex function from the lower forms of life until it had reached its maximum in the highest and most gifted animals; and that from this point man started on an entirely new basis, and that all the actions performed by him, from the cradle that rocks his first infancy to the coffin which at last cradles his second childhood, were the outcome of another and separate power. Herein we see the existence of a twofold error: for, firstly, the purely instinctive acts of animals are witnessed in their highest perfection, and in their most remarkable mechanical results, in such lower forms of life as seem to be altogether deprived of intelligence; whereas the introduction of intelligence in the higher animals stunts and overrides their purely instinctive acts. The bee builds its cell and the spider spins its web with an accuracy which the skilled hands of man might envy; but the dog, the cultured friend of man, learns to forsake the instinctive habits of his race, and to do things which no instinct could ever enable him to do, and to take joy in acts of obedience and affection which might furnish, and have furnished, useful examples to ourselves. Man, secondly, on the other hand, from earliest infancy to oldest age, exhibits much that is purely instinctive, and which deserves no higher or no other name. And this is seen not only in the baby feeling for, and kneading with its tiny fists, the breast that feeds it, nor in the second childhood that puts out its lips and grasps the hand that brings its food, but in all the "seven stages" of life that our great poet has described. In the schoolboy, the lover, the warrior, the justice, and the decaying senior, we see the several time-ordered instincts cropping out; and determining now, as they have done in the ages that are gone, that about and around which poetry may wrap its finest tracery of verse, upon which philosophy may build its brightest hopes, and from which, in another mood, it may shrink abashed and humbled, and by which religion is sometimes lifted into its highest phase and sometimes driven backwards almost to despair. Each period or stage of man's life has its special instinctive characters; and few of my audience will think that, in saying so much, I have overstated the quantitative value which is at this time given to the merely physical powers and determining forces of the complex life of man. The tendency, as I read it, at the present day is to pass to the opposite extreme, and to see nothing distinctive in human life; nothing which cannot be explained, in physical function, by reference to the lower forms of animal existence; and nothing in the mental and moral history of ourselves which cannot be referred to analogous processes of material change.

For myself, I must protest against this view; and I venture to do so, not as a philosopher or moralist, but simply as a physician in daily contact with those who are suffering from mental and bodily disease.

I see in the latter—the bodily ailments of men and women—as the most frequent cause of their occurrence, and as the most potent elements in their etiology, disturbances in the working of those social, moral, and intellectual processes which are unlike and apart from anything which can be even tortured into resemblance to the causes of disease in animals. The cares of professional life, the worry of the Stock Exchange, the heated excitement of the betting-room, the luxurious idleness of the club, the intellectually guided epicureanism of sensual excess, the feeling of the urgent pressure of family and social needs, as well as the fierce conflict between moral sense and religious training on the one hand, and doubtful practices and honest and dishonest scepticism on the other, are the most fruitful sources of loss of rest, recourse to stimulants and narcotic drugs, failure of appetite, disturbed digestion, mal-assimilation, "nervous break-down," and all the thousand ills that flesh is heir to. I say designedly that flesh is heir to, because I am now speaking of bodily ailment only, and affirm that this kind of causation of malady is peculiar to man, and that we lose sight of much which it behoves us to consider if we fail to see the broad line of distinction which, in this particular, separates him from the animal kingdom, to which he is allied.

Again, the inferences that have been drawn, from observations on animals, with regard to the phenomena of diseases apparently common to those animals and to man, have, I think, been pushed too far, and have led to much unintelligible controversy. The differences between the human and the animal organisation have been sometimes lost sight of, although many of them are obvious enough. Variola and vaccinia afford a striking illustration of my meaning, when we remember their different relations to infection and inoculation, and the curious effects which are produced by the passage of either of these poisons through the human body or through that of the cow. This is but one of many examples that might be given of the necessity for the inoculation of poison from the animal world, if we would infect the human being with its virus; and there are others which show that the ordinary mode of transmission from animal to animal is restricted to special groups of animals, and does not apply to man. Still further, the very interesting observations that have been made with regard to the inoculation of tubercle exhibit another striking difference between man and those rodentia upon which the experiments have been made in the greatest number; I allude to the freedom of the brain-membranes from the effects of the general infection. We may speculate upon the causes of such a difference; and it matters little for my purpose whether or no the greater development and activity of the human brain should determine its proclivity to suffer from tuberculisation of its meninges; that such difference does exist is a well-known fact, and points to a still greater and wider difference which we should not ignore. Again, the action of many familiar drugs upon the most familiar animals is so different from that which we know to occur in man, that therapeutic experiments upon the former should be received with much more than "one grain of salt" when they are put forward as our guides in the treatment of human malady. If mercury fail to increase the biliary secretion of dogs, and if opium cause diarrhœa in those our

delightful companions, we are not justified in the inference that blue-pill is useless in some forms of so-called "bilious headache," and that opium is valueless in some forms of diarrhœa.

To pass, however, from these physical ailments to those which show themselves in disturbance of the higher faculties of man, let me remind you of our great distinction from the members of the animal kingdom in exhibiting a form of malady, or rather many forms of malady, from which they are happily exempt. Something very like epilepsy occurs in dogs, in horses, and in domesticated birds, and it may be artificially produced in the rodentia. Something very like the stupidity and waywardness of man may be seen in our domesticated friends; they exhibit sometimes, as it has been said, "a disobedience almost human"; but the curious and complicated phenomena of insanity have never, so far as I know, been observed in the lower animals. We may see in them the delirium of fever, the hallucinations of commencing rabies, the irritability of advancing years or of premature decay, the outcome of forced luxuriousness that antedates the fretfulness of age; we may find them stupid and long-lived, or precocious, clever, affectionate, impulsive, and so possessed of faculties that would make us apply to them, and in an enlarged sense, the old adage, that "those whom the gods (and not only the gods, but men) love die young"; we see them weakened in body and in mind; but we do not see in them "insanity"—i. e., in any of the more striking forms in which it presents itself to the physician, whose business it is to deal with human beings.

This distinction, which adds to the many other helps that we may derive from the animal kingdom, seems to me to be of great value when we are attempting to show the difference between man and those creatures to which we may bear the closest physical and intellectual relationship. It is so, not only in regard to the lower corporal distinctions that may be traced, but in respect of that which affects man in his highest relations, his mental and moral capacities for exertion, and also, unhappily, for disease.

We cannot pay too high a regard to all the conditions which conduce to physical health, but I am sure that we shall lose much of quite inestimable value if we regard these only, and look to an infant, a growing child, a youth, or an adult, as a mere animal to be trained for this work or for that, just as we might train or "break"-in a dog or horse, and neglect those other elements in his higher training or education which have no direct relation to those lower phases of life, but which are an integral part of his development, and essential to his fitness for the position for which, by the nature of his constitution, as man, he is created.

All that I have already said upon the value of "subjective symptoms" of disease might be recapitulated here, and urged with augmented force; but if I were to do so, it would be a waste of your time, for I feel sure that there is no need for me to insist again upon the line of thought that I have ventured to suggest.

I cannot but believe that if we would understand the ills and sufferings of man, and endeavour to assuage them, we must deliver ourselves from notions, however plausible, and from theories, no matter how clever, which reduce man to the level of "the beasts that perish." While we refuse to be led astray by old-fashioned dogmata, that would ignore his relation to the animal world, and his possession of qualities which in no sense differ from those which we see in the donkey, dog, or horse, we should not fail to recognise in him faculties which they do not possess, and which may be the fruitful source of disease; powers in him to which they show only the faintest resemblance, but which, in him, may constitute, by their derangement, the misery of life; and modes of treatment which can only be successful by the fact of their basis being the belief in the fact of manhood.

At every period of life, of human life, we may often see much that is purely instinctive relegated to a higher sphere of motion, and may, in cynical mood, sometimes say about the youth—

> "'Twas strange that one so young should thus concern
> His brain about the action of the sky;
> If you think 'twas philosophy that this did,
> I can't help thinking puberty assisted."

But I am sure that we shall do our work the better if we come out of and above this lower ground, and recognise in the suffering man the fact of qualities which transcend all that we know of the mere animal life; see in him a sense of duty and of self-sacrifice, an outlook to the future and to the unseen, a weariness of the merely temporal, and a belief in the eternal, that shall lift him into the region of our personal sympathies, and out of those simply physical ranges of action which we recognise in cats and dogs. There may be much to disturb his appreciation of the two worlds to which he feels himself to belong, much to make him sometimes cling tenaciously and blindly to the "seen," or much to urge him onwards in an equally blind pressing towards, or absorption in, the "unseen," or much that makes him incapable of appreciating the reality of either; but still, as we look at man, in his misery, shadowed over with doubts, and hindered by fears, quailing before imaginary ills, or exulting in factitious joys, we can pity him, feel for him, try to help him, wonder at him, fail to understand him, but we cannot despise him, we cannot thrust him down to the level of the brute, but rather ask ourselves, in deep sorrow, or in deeper joy—

> "Tho' world on world in myriad myriads roll
> Round us, each with different powers,
> And other forms of life than ours,
> What know we greater than the soul?"

III. The next point to which I wish to direct attention is the belief in "Individuality"; the influence which this belief has exerted in the past, and still exerts in the present, history of pathology; and also the effect which a disbelief in the individuality of each human being seems likely to effect on the future of our science and art.

Our forefathers, and indeed many of our collateral relations in the brotherhood of our profession, did, and do still, cling to the persuasion that, although there may be much similarity between all the members of what we call the "human family," or "human race," there is to be found between each member of that race and every other a difference, which, not only for the sake of the individual, but for the purpose of complete scientific investigation, overrides the generic resemblance, so that every man, woman, and child presents for investigation and treatment a personal and a family history which we should be unwise to ignore. To have known the individual from his birth, or to have "brought him into the world," as the somewhat arrogant but time-honoured phraseology runs; to have known his parents and his family, and to have watched his childhood, youth, and manhood, were conditions which were held, and are still held, to be important elements in the probability of correctness in a physician's diagnosis, prognosis, and treatment of the case that comes before him. And surely there is something to be said upon the value of such knowledge. But I think that it has been heretofore often overrated, and that now it is in danger of being underrated. So long as, and wherever, such knowledge was the excuse for ignorance of general pathological laws, or the cover for carelessness in the examination of the patient, it was evidently wrong, and abundantly productive of false notions and mischievous treatment. It was an injustice to the individual and an injury to the practitioner. But let us ask if we are wise in ignoring all information of this sort? Whether we may not learn much from the family history and the idiosyncrasies of many, which would be utterly passed by except for such accidents of professional information? Whether or no we would not sometimes trust ourselves, in our own sufferings, to someone who knew us well and had known us long; who knew our parents and our belongings; and who, with no special skill in the use of many implements whose name may end with "scope," hit out some common-sense line of treatment, the result of much experience and far-seeing,—rather than commit ourselves to the care of the most highly-trained graduate in medicine, who could see our retinæ, trace our pulse, qualitatively and quantitatively examine our excreta, record our temperature, and bring to bear upon our case the last generalisation of the latest writer on our peculiar malady? I think that we should; or at all events that we should like to combine, if we could, the guidance from both sources: we should be glad to know all that our younger acquaintance could teach us, but we should also like to fall back upon the wisdom of our older friend.

That which has conduced the most powerfully to a disregard of personality and idiosyncrasy in the study of disease is the prevalent adoption of the statistical or numerical method in the processes of pathological investigation. No one can appreciate more highly than I do the value of

that method; but I think we have often missed the point of its teaching, and misapplied the real aids to be derived from it in the treatment of disease. Statistics are eminently useful for the destruction of hasty and erroneous generalisations; by their aid, and often by such aid alone, we can prove that certain currently received dogmata are wrong. But it often happens that "one fact, well observed, is worth [not only] a cart-load of opinions," but is equal to many folios of statistical inferences, calculated to any number of decimal points.

The value of statistics in pathology is in proportion, first, to the approximative identity of the several cases with which the inquirer has to deal; and then, secondly, to the number of the cases exhibiting such nearness of resemblance. When the former element, the resemblance of cases, is disregarded, no matter how wide the area from which the results have been derived, we have learned some curiosities of arithmetic, but nothing of real scientific value in pathology. When the latter element, the extent of the area of observation, is forgotten, we may have acquired some amusing learned lumber; but we obtain little that can be of real service in our attempt to grapple with the multitudinous variations of disease in so complex a being as man.

At the best our knowledge is but a fraction of the truth we want to know, and statistics do but tell us what that fraction is. But where, as it seems to me, our frequent mistake lies, is in the fact that we regard this definite and positive fraction wrongly in giving to it a substantive value, whereas we should look to the other side, the often much larger fraction, that represents the unknown, unexplained, and unreduced facts of medicine, and apply all our energies to their solution. An illustration may make my meaning clearer. In the statistical examination of the etiology of a particular disease—it matters not what—we say, e.g., that in 25 per cent. there was an hereditary taint, and we fall back upon the idea that the chances are as 1 to 3 that the disease was, in this particular instance, inherited, and so we sometimes content ourselves with such assumption, and seek for no further causation. Indeed, it may be within our personal knowledge that the patient's father suffered from a like affection, and so no other explanation seems necessary, and we do not seek for it. But let me ask whether, if in 75 per cent. of all cases of a particular malady, no hereditary taint could be discovered, we are right in putting the chances of heredity at so high a point as 1 to 3 in any particular instance? If in 75 per cent. the disease had originated spontaneously, or apart from hereditary taint, it might do so, and probably has done so, in some of those 25 in whom hereditary taint has been shown to be possible. On purely arithmetical grounds we ought to say that in only one-third of the 25 could there be an antecedent probability of family transmission of the disease. This would reduce the etiologic value of our statistical knowledge of heredity in this disease to less than 8 per cent. Then, let me ask, whether or no our duty is not to examine more carefully the other cases, those 75, or more properly 92 per cent., in whom we have no reason to believe in this mode of causation? and still further, whether or no we have not quietly put aside any investigation of such sort, when the bare fact of the existence of a like disease has presented itself in a near relation of the patient's who is confided to our care? The probabilities are as 92 to 8 against an hereditary origin; but we give our patient anything but the "benefit of the doubt," and frame our etiology, diagnosis, prognosis, and treatment upon an hypothesis which presents 92 to 8 chances against its being correct.

I have selected this example of hereditary taint, and have reduced its value to a minimum, because it rather militates against the view that I wish to enforce, of the importance of a knowledge of family history, and still more of individual character; but a similar line of argument might be employed to show the exceeding vagueness of our knowledge, derived from statistics, with regard to the other etiological conditions of a very large number of diseases, and the urgent necessity that exists for careful examination of each individual case, as to the origin of the malady which may bring it before our notice, and of the extreme danger which attends the propensity to fall back upon numerical statements.

Our daily and hourly work is with individuals, and I cannot but think that, so far as regards the comprehension of their diseases and their needs, statistical pathology has afforded us no other aid than the elimination of much currently received opinion. This has a real and obvious value; and it is in this destruction of error, and not in the construction of the science of medicine, that the numerical method finds its *rôle*.

Again, it is curious and interesting to know—as we do pretty accurately—how many people in 1875 will be killed by railway accidents; how many will break their legs in Hansom cabs; how many will drink sulphuric acid; how many will be burned to death; how many will die of phthisis and carcinoma; and how many octogenarians will marry young girls under twenty years of age. But when we have obtained this knowledge, so curious, and yet so precise, let me ask—of what value is this to you or me, or any of our patients, who may be starting on a railway journey, "hailing a Hansom," using sulphuric acid, shutting off our gas at night, exposing ourselves to cold or worry, or advancing in years to the fourscore, which, on high authority, is said to be but labour and sorrow"? So far as I can see, the value is inappreciable, for life is too complex in each individual for the application of many general laws, and least of all for the deductive use of those which are derived from a mere regard to numbers.

By statistical formulæ we may "insure" lives, so as to benefit the survivors and protect shareholders; but we can use them only in their application to the many; they are of no pathological significance to the individual. That one man is accepted at ordinary rates, and that another has to pay an addition of 20 per cent. to his premium, may be a useful arrangement for the office, which deals with masses; but it affords no guarantee that the former may not die of fever within a month, or that the latter may not outlive all those who had no drawbacks to their claims. And here let me say that a practice somewhat common in insurance offices may, I think, lead to some serious discomfiture hereafter; I mean one which seems very natural—viz., that of making an addition to the premium for insurance of a faulty life, to be removed if, after five, seven, or ten years, on re-examination, the proponent is in good health. This is done with a kindly feeling of regard to the individual, but not on an established basis of statistical knowledge; and the two elements of judgment of the probable future of the individual on the one hand, and the requirements of the office on the other, are somewhat jumbled together; and so we, as physicians and advisers, are stepping out of the known lines of average probability for the many into the vague territory of knowledge of the individual, with regard to whose personal and peculiar chances of viability we know little or next to nothing.

Perhaps there is nothing which marks more distinctly the individual peculiarities of people than the relations which they bear to external agencies—material and immaterial; such as light, heat, electricity, food, and drugs. We call these peculiarities, idiosyncrasies; we meet with some of them two or three or more times in twenty years, but others are so rare that a long life of varied and wide experience may have witnessed but one example. Some people are most delicate electrometers and magnetometers; and I know one such who became blind in a thunderstorm eight years ago, and whose physical frame before and since that time is always contorted by electrical and magnetic disturbances long before the former are recognised by ordinary people, and when the latter have only been displayed by perturbations of the machinery for electric telegraphy. We may all possess properties which are influenced by such conditions, but they are affected to only such a slight degree that the existence of such sensitiveness as that which I have mentioned must be regarded as individual. Again, peculiarities with regard to food furnish another example of the same distinction. One person cannot take egg in any shape or form; to another tea and coffee are poisons; some cannot eat flat fish; others are put into cutaneous tortures by strawberries. And so with drugs. Ipecacuanha will make some sneeze; a grain of iodide of potassium will iodise one person, a grain of grey powder will salivate another, opium will produce colic in a third, and so on. In the face of facts such as these, it behoves us to regard each individual member of the human family as at present, and at all events for pathological and therapeutical purposes, unexplained and often untouched by those general statements, or so-called statistical laws, which we have been able to frame with regard to the behaviour of the race.

We speak of dentition troubles, of all the morbid tendencies which accompany the several epochs of life, of the surgical operations that may be undergone, of the diseases that are prevalent at this age and at that, and, indeed, sometimes of the end of it all in death, in such way that one is reminded of the comfort taken to him or herself by that very clever person who moralised upon the post-mortem, or perhaps not always post-mortem, treatment of the eel! "Custom hath made it in him a property of easiness," may sometimes be said of the physician or the surgeon, as well as of the grave-digger who sang over his ghastly toil; and also of the astute fish-fag, who failed to recognise the individuality of the eel, upon whom was being performed the last tender office of removing its cutaneous envelope.

Daily experience teaches us that each case, or rather that each man and woman, must be examined for himself and herself; and that nothing short of a knowledge of the individual will be of real service to us, if we would understand and treat disease. We are all of us alike, yet we are all dissimilar. Each of us has, for himself, to go through but once the stages of development that are common to us all. Each individual life is continuous, and passes, onwards and alone, through growth to maturity and decay. No one can keep with us; no one can enter into all the mysterious windings of our intellectual and moral being; no one can do more than share our troubles and our joys; no one can take them from us; the sympathy and the love that help us to bear them, and which we so fondly cherish, do not render us less alone; and as we reach this epoch, or that period of our existence, and find ourselves floating, drifting, or manfully pushing onwards upon the rivers, and over the depths and shoals of time, and which we know that our fathers have passed through before, we cannot help, each in our individual consciousness—in spite of statistical law, of bold generalisation, and *reductio ad absurdum* of all preconceived opinion—we cannot, any one of us, help feeling, as we come to one or many of them, as if

> We were the first that ever burst
> Into that silent sea.

IV. And now I come to the last point that I wish to bring before you—namely, the Individuality or Speciality of Disease. These words do not fully convey my meaning, and yet I know not any others which would serve my purpose better. By illustration, however, I trust that what I mean may be made apparent. The chronic wasting diseases with which we are all painfully familiar—such as tubercle, cancer, rickets, Bright's disease, Addison's disease, gout, and the like—present many points of resemblance *inter se*; they have symptoms in common; many of their accompaniments or intercurrent phenomena are identical; there is much that is common to their modes of termination, and much that is alike in their anatomical appearances. We know, with some approximation to precision, the commoner sequence of events in each of them; can sometimes explain something of their causation; and can predict in general terms, their future. An enlarged view of the living bodily functions, and a more careful and extended examination of the organs and tissues after death, have shown a far wider range of physical alteration than that which was believed to exist in many of the diseases to which definite names were given in days gone by. Microscopic analysis, becoming finer and more exact, has revealed such a notable resemblance or identity in the ultimate facts of structure-change in many diseases, that the accomplished pathologist may fail to describe, or even see their difference, while their rougher features have enabled even the tyro to put them at once into this category or into that.

And so there has grown up a tendency to sweep away distinctions and names which were the delight of our forefathers; to disbelieve in the existence of so-called "constitutional" disease; and to refer all the changes of tissue to the accidental operation of local interferences with nutrition. There is much to be said in favour of a reconsideration of all old distinctions, and of the names by which they may have become familiar. It is by no means necessary, for example, that the kidney should be always involved in those degenerative processes that may fairly be called "Bright's disease." It is not essential that the suprarenal capsule should be affected in a cachexia that well deserves the name of "morbus Addisonii." It is not constantly found that the ligamentous and cartilaginous tissues of a joint are affected by a special inflammation in one whose antecedents and symptoms warrant the application of the term "gout" to the malady from which he suffers. But I think we should be going far wrong if, in regarding either the variety, the resemblance, or the wide extent of symptoms, we lost sight of the individuality of that which underlies those symptoms—i.e., of some central fact, property, force, element, or tendency, which finds expression in the special grouping of phenomena or symptoms. There is something that is wrong in the organism of A, and which is radically and essentially different from another "something" that is wrong in the organism of B, when the one presents tubercular disease and the other cancer. We do not know what that something is, nor does it seem to me that we do more than approximate a knowledge of the direction in which we should look and work in order to find it out. We know very much of the general order of events, of the relative frequency with which this organ or that is found involved in tubercular, cancerous, or other cachexia, but as to the determining causes of these differences of proclivity in the affection of particular organs, we know next to nothing. They are at present ultimate facts of science, and they are like to those which pertain with regard to the "acute specific diseases." With respect to them, we know that scarlet fever affects the throat, the skin, and the kidneys in a particular manner; that the poison of measles, of typhoid, and of other exanthemata, exhibits another form and order of infection; but as to the reason for these facts in their history we know nothing. We fall back, in regarding the latter—the acute specific diseases—upon the individuality of the poison that is brought into the body from outside; with regard to the former—the chronic and constitutional maladies—we must, I think, adopt a similar process of thought, and recognise a speciality or individuality in that which determines the starting-point and subsequent career of morbid change. It seems to me that the further we carry our knowledge of the intimate detail of structural alteration, the further do we carry ourselves away from the discovery of the "missing link." Diagnosis may often be as easy as it is possible to conceive up to the point of recognising some diseases, to which we may give a name that is useful for the purposes of recognition, but we are only on the threshold of inquiry as to the whole pathology and etiology of these affections, or, in other words, their complete diagnosis.

With regard to many diseases, we are in a position that might be described as somewhat like that of the physiologist and the schoolboy in combination, when they have found two bird's-nests. The one—the histologist—shall examine the contents of one of the eggs of each nest, and apply all his microscopical powers upon the cells that he shall find; he may call the chemist to his aid, and yet fail to give, after the most searching gaze and chemical analysis, even a guess as to the nature of the bird that would be developed by the simple application of warmth to another egg which he has not broken: the other—the schoolboy—looks at the shell, and decides in a moment that this will become a blackbird, and that the other will produce a lark. What the relation may be between the colour and the marking of the shells, and the wonderful constitution of their contents that shall determine the development of this bird or of that, we do not know; what is the difference between those contents we do not know, but let us remember that a quite specific and wide difference does exist between them, although it is far too fine for any of our processes of investigation to demonstrate its nature; and yet that a diagnosis may be made by observation of the character of certain superficial phenomena which we can in no way connect with the essence of the difference. If we apply this illustration to the diagnosis of disease, we see that the pathologist sometimes ignores the existence of difference which he cannot apprehend; misses his true line of work, which lies often in another, and as yet unconsidered, direction; while the practical man solves the question at a glance. The difference really exists, but it is by its outcome, in the modification of life-functions, that we really make our diagnosis of disease; and by regard to these, I think we are driven to a belief in the individuality of special ailments.

While we are perhaps losing way rather than making advance in our knowledge of some classes of disease, by the endeavour to get rid of their individuality, there is, at the

same time, a tendency to over-refinement of specialisation and nomenclature in regard of other classes. Such terms as "locomotor ataxy," "Cruveilhier's atrophy," and the like, may be very useful if they but direct attention to the lines along which degenerative changes in the nervous centres are apt to run; but if there is attached to them the kind of importance which we sometimes find they have received, we wander, I think, from the true path of scientific investigation, and are led to separate from one another maladies which are much more closely allied in their real nature than the difference of their names would warrant us in supposing. There is an individuality in these, but let it not be over-estimated; there must be something which determines why this tract of fibres or that in the spinal marrow shall be the starting-point of morbid process or decay; but the conditions which lead to these differences have not yet been made out, and there are many so-called causes of disease which are common to them all. What I think, then, that we should do is, bearing in mind the individuality of disease, search into all its phenomena, not rest satisfied with those which seem the most relevant and the most consistent with the present modes of physiological thought, and the ascertained facts of pathological research; but pass beyond them into the outlying regions of vital phenomena, and perhaps discover in them—(i. e., in some apparently irrelevant facts) the clue to a solution of their mystery.

In recapitulation, let me remind you—1. That, by losing sight of, or underrating, the primary fact of life, we deprive ourselves (*a*) of the information to be gained from a study of subjective symptoms; (*b*) we often misdirect our therapeutic efforts by eliciting vital action rather than conserving vital force; and (*c*) lose sight of many of the most important causes of disease. 2. That, by failing to see the speciality of the nature of man, we underrate or ignore (*a*) much of the etiology of human suffering; (*b*) are often misled by the results of observations upon animals; and (*c*) are in danger of misinterpreting the facts of the most serious maladies that may afflict our fellow-creatures. 3. That, by disregarding the individuality of man, we are in danger (*a*) of again and in another way losing a due appreciation of the causation of disease; and (*b*) of overrating the value of statistics, and of being led astray by their apparent precision, which exists only with regard to masses. And 4. That, by an unsound application of the idea of the specificity of disease, we may, on the one hand, (*a*) sweep away distinctions which are facts of pathology, and, on the other, (*b*) raise up or lay down lines of demarcation which are unreal.

From what I have said, it is, I think, obvious that the science of medicine is in a state of "change" as well as of "progress." It has not yet arrived at the degree of exactness which may be found in the simpler sciences; but those who are devoting themselves to its pursuit are pressing towards that end; and each is endeavouring so to throw his mite into the treasury of knowledge, that a scientific ordination of the facts of pathology may hereafter be a possibility. But the facts are so diverse in kind, so varied in appearance, and so bewildering in their complexity of form, that we must wait, and perhaps wait long, for their due arrangement. Thousands of observed facts lie as yet hidden in the valuable but unrecorded experience of those who are daily adding to the unwritten lore of medicine. We gather scraps of them in conversation and in consultation; we may often see something of their influence upon the habit of thought and of practice of those whose large stores of information have not as yet been exposed to view, and which have not as yet been sorted for personal use. But a true science of pathology cannot be until the knowledge of all individual workers is the common property of all. In the meantime we must "learn to labour and to wait"; and we must least of all commit ourselves to any one particular school or line of thought, but rather cultivate that habit of mind which has "a look southwards, and is open to the whole noon of Nature."

Those who are the workers in this wide field are not all in one "stage," as it has been termed, of scientific inquiry. We are not all of us in either the "theological," "metaphysical," or "positive" stage of thinking with regard to our relationship to the facts and forces around us. Very few individuals who have seen much, thought much, and felt much, are so limited with regard to the sum total of their experiences as to assert even for themselves a position—an exactly limited position—on either one of these three platforms. But each one has his bias or tendency of thought; and the work that each does, and the results to which such work tends, are greatly influenced by such underlying and directing force. I have endeavoured to show the effect which, as it seems to me, may be produced by an over-attachment to one line of investigation, and by a neglect of another, the results of the pursuit of which the student of man can ill afford to lose.

In our recognition of the *Speciality of Disease*, we have carefully to examine the nature and the sources whence they come, of all the contaminations by which the stream of life may be damaged or defiled. They may be puzzling, hard to separate, and still harder to trace to their source. They may be complicated in their effects, and so mixed together that again and again we may be baffled in our attempts at their analysis. But what we want is work, not on any preconceived theory, but work that shall faithfully follow onwards and trace backwards the line of sequence of events, and eventually yield, as it has done before, a real knowledge of the facts we wish to know.

Again, with regard to the *Individuality of Man*, we must strive to show whence each life has come; the nature of its source; the conditions of its youth; the struggles of its onward progress; the valleys through which it has passed, and the rocks it has had "to overleap or rend." We may often be perplexed in our attempt to solve the problem it presents, but we must accept the facts of their existence, and of their variety. We see a quiet onward flow in the course of one, and a stormy, labouring, toilsome course in another. One seems like a river wandering through valleys in which children play, and upon whose banks age reposes; untroubled by the oar, unhindered by the wheel; and sometimes, in deep places, seeming to be at rest, but still passing, although gently, onwards, without sound or ripple, to the far off sea. Another life-stream comes from its rocky home, dashes hither and thither, in what seems its wayward youth; but gathers strength as it flows on, and does mighty work, setting in motion a thousand busy looms; bearing on its broad breast the light craft of idlers, and also the dark, heavy burthen of outlying toil; working and carrying still onwards the labours of a thousand lives, through quiet valley or through noisy town, until it, too, finds its home. We must know all that makes up individual life, if we would understand its ills. We must go back to its source, and look around at all through which it has had to pass or to work its way, if we would know how to understand or avert the troubles it may meet.

And again, with regard to *Man*, it is not until we recognise in him his true relation to the world that lies around him—which in many of its forms of life comes so near, but which is yet so far removed from him in his higher phases—that we shall duly understand his sorrows or whence they come, in such way as to prevent them or relieve them when they are thickly hedging him about.

And, lastly, we must duly appreciate the great fact of *Life*—the mystery of mysteries—that underlies all our knowing, and overarches us with sometimes an abyss of light, sometimes with impenetrable gloom. When we try to realise it, we seem to be—for we ourselves are a part thereof—on the surface of a boundless ocean; above us the sky, now dark with cloud or rent by storm, now lit with sunbeams or trembling with the pale light of stars; beneath us a mighty deep, with its unknown treasures, mysterious currents, and "sense of unfathomable danger." Sometimes we "see the light and whence it flows"—we "see it in our joy." Sometimes we see the land, and press towards it; but again the night comes down, the horizon line is lost, we are poised between two worlds, and, although we may strain our eyes to see and our ears to hear, we may find no token to tell us of the points in which they meet—no glimmer of the unseen things that sever them.

But let us thank God that we are not left alone, and that in such darkness there often arises light. For often, when most sorely troubled with the surrounding mystery—the abiding mystery—that shrouds the details of our knowledge of both Man and Life, we find in our own consciousness, our thoughts and feelings, that which may enable us to help our fellow in his sorrows, relieve him in his sufferings and fears, and banish from his mind and heart the clouds that

may sometimes have gathered so darkly around our own. And having this sympathy, and holding in our recollection and present thought those phases of our own and of other lives—which we know full well, but which we cannot reduce to words,—we shall be the better fitted to explore and unravel the whole series of phenomena which present themselves in the lower ranges of pathological investigation. The method of such physical research, as well as its results, will check us when we may be disposed to drift away into the mist or to soar into the clouds—will help us to cultivate exactness in all directions of inquiry, and so contribute to the science and art of Medicine, which, in spite of all its failures, misdirections, and missing links, is yet one of the greatest boons that man has been the means of conferring upon man, and which, we believe, will in the future far transcend, in its benefits to mankind, all that we have known of its doings in the past.

THE

ADDRESS IN SURGERY,

Delivered before the Annual Meeting of the British Medical Association, at Norwich, in August, 1874.

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MR. PRESIDENT AND GENTLEMEN,—When, by the favour and at the suggestion of my local friends, and with the approval of the Council of this Association, I was chosen to address you to-day, I accepted the honourable responsibility, and, in doing so, took counsel rather of my vanity than of my discretion. To some, whose mental activity is great, and whose pen moves glibly, the opportunity would be esteemed, as, indeed, it is, a golden one. To me, with unready thoughts and with unpractised pen, who delight rather in reflection and contemplation than in speech or written words, the honour was—I may as well confess it—more oppressive than pleasing.

Having, however, accepted the duty, I shall, perhaps, best explain—I may almost say apologise for—the scope and object of my address, if I recount the thoughts which passed through my mind while in quest of a subject.

A retrospect of Surgery compassing the time during which I have been in active work came first to mind, but this has been so often, so ably, and so recently done, that the intention was dismissed almost as soon as it presented itself. I turned next to the records of my own experience, feeling sure that these must contain materials enough, if properly set forth, to furnish an hour of interesting commentary; but though, on looking through my notes, I found instructive illustrations of disease and curious and important cases in abundance, they seemed to display no special features, either of pathology or of treatment, worthy to occupy such an audience.

The novelties of surgical practice introduced during the last year or two are scarcely sufficient or scarcely important enough to constitute a theme. They are chiefly comprised in Esmarch's bloodless system of operating and Dittel's elastic ligature, concerning which I will only say that the first is not a novelty, having been practised by one of our members many years ago, and that the second is, in my opinion, more curious than useful, and not worthy of a place either in the records or in the practice of surgery.

One great subject there is which, if not exactly a novelty, is of recent time, and is still waiting for a solution, both as to its facts and as to the theories held to account for its facts; I mean the germ-theory of putrefaction, and antiseptic surgery. This subject—for I associate them—I deem to be of surpassing importance and interest. Underlying, if not undermining, much of the existing fabric of surgical pathology and practice, it cannot be too often brought to the bar of professional criticism, for on its right solution, whether it be true or not, depend a multitude of points in daily practice, and even probably the lives of many of our fellow-creatures. This subject would certainly have been my choice but for two considerations. More than one influential member of the medical press proposed, at the commencement of the year, to make and carry out a full investigation of the entire question—a proposal which, however, still remains for fulfilment; and I felt, moreover, that in our sectional meetings, papers by most competent men would probably be forthcoming, and would lead to searching discussion.

Turning, then, from these topics, my thoughts reverted towards home, and fixed themselves on that subject which for every Norfolk surgeon possesses an undying interest, and which, for all practitioners from some point of view, may be presumed to have considerable attraction. The city in which we are now gathered is the centre of a district in which cases of renal and vesical calculus are supposed to be, and probably are, more frequent than in any other part of the world. The explanation of this frequency is so often demanded of one, both in professional and non-professional society, and is so difficult to give, that I propose to discuss the subject from this point of view, and this alone, not touching, except incidentally, on the question of treatment, about which overmuch has already been written. I propose further to narrow the question by limiting it to one form of stone—namely, that composed of lithic acid and its salts, which I need not say constitutes at least five-sixths, or more probably, so far as this district is concerned, nearly nine-tenths of all primary formations. While, however, I thus limit the inquiry to this one species, it will be understood to include not merely the accidental occurrence of vesical stone, but the diathesis out of which stone arises; indeed, I have now only to do with calculus in the bladder, in that it expresses, roughly and approximately, the relative frequency or rarity of the lithic diathesis, just as the mortality in any place or district may be taken to represent, roughly and approximately, the amount of sickness in that place or district. For one case of stone in the bladder which presents itself, there are at least ten met with in which the lithic diathesis, or as it may for convenience be termed "lithuria," is fully marked in the form of lithic deposit, sand, or gravel. Let us then inquire—(1) Is lithuria, as represented by cases of stone in the bladder, more common in this district than in any other part of the United Kingdom? and (2) If it be, what explanation can be given to account for the excess?

The subject has, on more than one occasion, undergone investigation. Just a hundred years ago,* Dr. Dobson, of Bath, in an inquiry on the disposition to stone in the cider counties, compared with some other parts of England, demonstrated that stone abounded most in the eastern, or Norfolk district; that the north-eastern, including Newcastle, York, Leeds, and Manchester, stood next in frequency; that the north-western, including Liverpool, Chester, Shrewsbury, and North Wales, had the fewest cases; and that the cider counties of Devon, Gloucester, Worcester, and Hereford, had nearly the same as the north-eastern. About fifty years ago Mr. Smith, of Bristol, went over the same ground, but more fully than Dobson, and, speaking generally, it may be said, he met with similar results—that stone abounded, above all other places, in Norfolk; that a larger proportion was found in the eastern than in the western district, and that Ireland and Scotland were comparatively free from the disease.†

Dr. Yelloly, in 1830, still further elucidated the subject, and found that, in Ireland, calculus was very rare, especially in its country population; that in many counties no operation for stone had been practised in any of its hospitals, and in some districts the disease was almost unknown. In Scotland, he found as much variation in frequency in different parts as in England: in the very northern counties it was very rare; in Aberdeenshire the proportion was more considerable; in the southern and south-western districts it was exceedingly rare; while both he and Mr. Copland Hutchinson‡ showed that, taking the whole country generally, stone was as frequent in Scotland as in England; and that in both it was much more frequent in town than in country populations.§

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* Vide a Medical Commentary on Fixed Air, by Matthew Dobson, F.R.S., 1785.

† Vide Medico-Chirurgical Transactions, vol. ix.

‡ Ibid., vol. xvi., p. 94.

§ Vide Philosophical Transactions, 1829 and 1830.

In my own investigation, I have consulted (1) the Registrar-General's reports for the last five years for the United Kingdom; (2) I have applied to one of the surgeons—generally to the senior surgeon—of nearly all county hospitals, and of all others having a considerable number of beds, or of those likely to admit and treat stone cases; and I desire now publicly to express my deep obligation and warmest thanks to those gentlemen—and they include nearly all to whom I applied—who have so promptly, so courteously, and so fully answered my inquiries. The information obtained will appear in a table comprising all the cases received into their various hospitals during the last five years; the number of children under 10; the average age; the number of beds and the proportion of stone cases to the whole number of in-patients, with incidental remarks by my various correspondents. I am aware that both these sources of information are open to criticism and objection, on the score of inaccuracy. The Registrar-General's reports, especially those from Ireland, are admitted to be faulty; the causes of death are often vaguely and carelessly stated; frequently no certificates are given, and the true causes of death are overlooked; but, where the numbers are large, and the statistical system on which the various data are constructed is the same from year to year, it is probable that a near approach to truth and comparative accuracy is really obtained. So far as hospital records are concerned, they are, doubtless, more nearly accurate in themselves; but the inferences to be drawn may be vitiated by various causes; thus eminent and successful operators may attract cases from great distances, so as to make it appear that a larger proportion of stone exists in some particular districts than is actually the case, and, therefore, a less proportion in others. This disturbing cause is, perhaps, chiefly found in the metropolis and in some of the large cities; but, so far as London is concerned, I have ascertained the locality from which each case was derived, so as to allocate each to its proper county, while out of London this vitiating cause does not probably materially affect the result; the result being that, in almost all cases, the returns from the various hospitals fairly represent the amount of stone, and therefore of lithuria, existing amongst the poorer classes of the population surrounding those hospitals. Another source of inaccuracy arises from the increase in number of hospitals, of cottage hospitals, and of dispensaries which contain a few beds, in all of which operations are occasionally performed. Further, there are many surgeons unconnected with hospitals who deal, and deal generally very successfully, with the cases occurring in their own immediate neighbourhood; but these, though they are many in the country at large, are but few in each county, and do not greatly disturb the hospital averages. In Norfolk, for instance, where stone cases are quickly detected and keenly watched, and where certainly there are plenty of capable and enterprising surgeons, I do not believe that more than six or eight cases are annually operated on in the county, while the various hospitals continue to maintain their full average numbers.

Taking, then, the mortality from stone, the Registrar-General tells us that, in England, there are more than twice as many deaths from stone as in Ireland in proportion to population.

Yearly average of Deaths from Stone for Five Years ending 1871, *in proportion to Population and to whole number of Deaths.*

	Deaths from Stone.	Of Population.	Of all Deaths.
England and Wales...	200	1 in 100,331	1 in 2467
Scotland	59	1 in 51,903	1 in 1200
Ireland	27	1 in 214,740	1 in 3354

In Scotland there are twice as many deaths in proportion to population as in England, and four times as many therefore as in Ireland. Further, it appears that in the northern counties of Scotland there are nearly four times as many deaths from stone as in the southern counties, the population being nearly equal. Similarly, in Ireland the mortality is three times as great in the northern counties as in the southern. In England the mortality from stone has increased during the last five years. For several quinquennial periods there was a steady decrease, which led to the belief that stone was really a diminishing disease; but this inference, I fear, was erroneous; all the evidence I have been able to collect tends to show that it is just as frequent as ever, and that the apparent diminution was due rather to better treatment, more willingness to submit to operation

Mortality from Stone in England and Wales in five successive Quinquennial Periods.

1847 to 1851	the average of deaths was		232
1852 to 1856	,,	,,	216
1857 to 1861	,,	,,	184
1862 to 1866	,,	,,	168
1867 to 1871	,,	,,	200

since the introduction of anæsthetics, and especially to greater nicety and accuracy in discriminating the causes of death. For instance, in 1840 there were 303 deaths from stone and 132 from cystitis; while in 1870 there were 195 deaths from stone and 415 from cystitis. This remarkable discrepancy is due, not to any real difference in the relative proportion of the two diseases, but to the more exact appreciation of the real causes of death. As in Ireland and Scotland, so in England, the mortality varies greatly in the different registration districts. The northern and north-western counties show the smallest mortality and the eastern counties the greatest, being in the proportion of nearly 1 to 4. Next in amount of mortality to the eastern are the south-eastern and south midland counties. Yorkshire, Wales, and London show a medium mortality; and the west midland and south-western counties have almost as small a mortality as the north and north-western. These facts appear in a table showing the number of deaths in five years, and the proportion to population, and the whole number of deaths in each district.

Yearly average Mortality from Stone for Five Years in each Registration District in proportion to Population, and total number of Deaths.

District.	Yearly Deaths.	Of Population.	Of total Deaths.
1. London	40	1 to 70,099	1 to 1904
2. South Eastern	22	1 to 83,978	1 to 1829
3. South Midland	15	1 to 86,367	1 to 1882
4. Eastern	18	1 to 63,475	1 to 1319
5. South-Western	9	1 to 203,985	1 to 4098
6. West Midland	19	1 to 128,216	1 to 3028
7. North Midland	15	1 to 85,959	1 to 1928
8. North-Western	14	1 to 209,681	1 to 6187
9. Yorkshire	26	1 to 77,520	1 to 2132
10. Northern	6	1 to 191,895	1 to 5459
11. Monmouthsh. & Wales	17	1 to 77,202	1 to 1721

Proceeding to further detail, I have ascertained the mortality in each county of England and in London and Wales, for five years, in proportion to population. This calculation, although accurate in the main, is open to this objection—that the number of deaths even in five years is too small in many of the counties to be above the reach of accidental fluctuation. Moreover, the deaths in London do not quite accurately represent the mortality for London proper, because the hospital population of the metropolis is drawn from various distances, and especially from the home counties, thus, at the same time, diminishing the mortality in those counties. Making, then, some small allowance for these slight sources of error, it appears that the greatest mortality obtained in these six counties, in the order named—viz., Norfolk, Huntingdonshire (a small population), Kent, Sussex, West Riding of Yorkshire, and Leicestershire; that the smallest mortality obtained in these six counties, in the order named—viz., Cheshire, Cornwall, Cumberland, Hampshire, Durham, and Devonshire; while the other counties hold a varying position between these extremes; the extremes being, that in Norfolk there is one death from stone yearly in 42,000 and odd, in Cheshire there is one in 425,000 and odd.

Mortality from Stone in Five Years, ending 1871, *in the several Counties, and the Annual Death-rate in proportion to Population.*

	Deaths in 5 years.	Population.
Norfolk	50 ...	1 in 42,744
Huntingdonshire	5 ...	1 in 59,137
Kent	45 ...	1 in 60,585
Sussex	30 ...	1 in 61,139
Buckinghamshire	12 ...	1 in 61,335
Yorkshire (West Riding) ...	94 ...	1 in 61,405
Leicestershire	19 ...	1 in 64,115

	Deaths in 5 years.		Population.
Monmouthshire and Wales ...	74	...	1 in 78,140
Warwickshire	48	...	1 in 65,670
Shropshire	20	...	1 in 66.750
Suffolk	25	...	1 in 67,081
Hertfordshire	13	...	1 in 68.250
London	201	...	1 in 69,500
Cambridgeshire	13	...	1 in 69,845
Yorkshire (North & East Ridings)	34	...	1 in 71,475
Worcestershire...	23	...	1 in 73,100
Staffordshire	57	...	1 in 76,965
Northamptonshire	14	...	1 in 82,525
Berkshire	11	...	1 in 93,470
Westmoreland	3	...	1 in 101,575
Middlesex	9	...	1 in 104,065
Lancashire	61	...	1 in 108,145
Derbyshire	12	...	1 in 122 485
Nottinghamshire	13	...	1 in 124,530
Gloucestershire	18	...	1 in 135,765
Bedfordshire	5	...	1 in 140,479
Oxfordshire	6	...	1 in 142,690
Northumberland	12	...	1 in 142,925
Wiltshire	8	...	1 in 145,610
Essex	13	...	1 in 146 040
Herefordshire	4	...	1 in 150,900
Dorsetshire	6	...	1 in 151,825
Surrey	13	...	1 in 183,150
Somersetshire	12	...	1 in 193,070
Devonshire	15	...	1 in 196,426
Hampshire	11	...	1 in 207,570
Durham	11	...	1 in 246,420
Cumberland	3	...	1 in 342,125
Cornwall	5	...	1 in 364,846
Cheshire	8	...	1 in 425,520

Turning now to the hospital records, it appears that they agree fairly with the Registrar-General's returns, with one exception, to be presently mentioned. Application was made to between eighty and ninety hospitals in England, Scotland, Wales, and Ireland, and reports have been received from between seventy and eighty; and these reports, besides containing the number of cases admitted during the last five years and the respective ages of the patients, contain, also, in very many instances, results of treatment and practical remarks of great interest and value, which, however, I shall for the most part reserve for future use, merely quoting those which bear upon the present inquiry.

It would be impossible to read in detail the following abstract, but I will cull from it the most salient points, merely premising that the column expressing the proportion of stone cases to the whole number of in-patients has been constructed on the principle that the admissions of 1872 were assumed to be the average of the five years. It must also be borne in mind that all hospitals do not admit patients on the same grounds; a small hospital, having but few beds and narrow income, would admit all the stone cases belonging to its area, but would necessarily restrict the admission of general cases to the more urgent ones; hence the proportion of stone cases would appear greater in small than in large hospitals, and especially in stone districts. For instance, we have in this city a Children's Hospital containing twenty beds, in which the proportion of stone to other patients is one to thirty, and similarly, in the small hospitals of Yarmouth, Lowestoft, and Peterborough, there appears an undue proportion; but, taking the general run of county hospitals and hospitals in large towns, they are probably guided by the same method in their admission of cases, and the relative number of stone to general cases does in them give a fair picture of the amount of lithuria in each district.

Beginning, then, in this county, where undoubtedly there is the greatest amount of stone, permit me to say a few words specially of the Norfolk and Norwich Hospital, which has long held a position of authority in all matters in which this disease or diathesis is concerned. The hospital, which is now a trifle over one hundred years old, presents, in the accuracy with which its books have been kept, a model for all hospitals. From its opening to the present time, I have without difficulty ascertained the name, age, and residence of every stone case, and where any doubt existed, the doubt was in the mind of the surgeon; there is no ambiguity in the records. Every stone which has been removed, either during life or after death, became the property of the hospital, and, to the number of about 1050, may be seen forming a noble contribution to the annual museum of this Association now on view in the adjacent room.

Including renal and urethral calculi, there have been admitted about 1270 males and 56 females. From this record it would, I think, be easy to show that, so far from stone being a diminishing malady, it is rather an increasing one, even beyond that which the increase of population would account for. In 1773 there were nine cases admitted, in 1873 there were twenty-five. In the earlier year there were barely half the present number of beds, it is true; on the other hand, Suffolk had no hospital then, and the patients were drawn from a vastly greater area than now. This record also goes far to show that the sanguine and somewhat romantic view that stone would come to be "stamped out," expressed by a distinguished friend of mine, has but little chance of fulfilment. During the last five years, the period chosen for comparison, there were 90 cases of stone admitted into the Norfolk and Norwich Hospital, or 1 to 55 of all in-patients; in the Lynn Hospital there were 20, or 1 to 124 in-patients; in the Yarmouth Hospital, 21, or 1 to 32 in-patients. Now let us compare this with one of the hospitals in the south-western district—the Devon and Exeter Hospital, in which were admitted six cases, or 1 to 1300 in-patients; or with the Taunton and Somerset Hospital, in which, with ninety-two beds, no stone case has been received in five years, and, my informant adds, only two in forty years. This, however, is an extreme instance; in very many hospitals fit for comparison with our own, the proportion of stone to general cases varies from 1 to 200, or 1 to 4 0; but there is a Midland district, having for its chief towns Birmingham and Wolverhampton, in which not only do stone cases prevail largely, but prevail especially in children. In the Wolverhampton Hospital, 50 cases have occurred in five years, or 1 to 101 admissions; of these 50 cases, 37 were in children under ten years. In the Birmingham Hospitals, the General, Queen's, and Children's Hospitals, 127 cases were received, of which 69 were under ten, and the same fact will appear in the report from other and smaller hospitals in the same district. Compare this with the Norwich cases; out of 90, only 18 were under ten years of age; but the contrast is greatest if we compare it with the Aberdeen Infirmary, which admitted 47 cases in the five years, of which only 3 were under ten. Some explanation of this singular contrast I will presently give.

The metropolitan hospitals will speak for themselves, so far, that is, as my information goes; but they scarcely come into comparison with ordinary provincial infirmaries. The hospital reports from Ireland, so far as they go, bear out the Registrar-General's reports as to the very small amount of lithuria in that happy land. Even in Dublin, a stone operation, my informant says, is an "event."

In Scotland, hospital experience does not seem to be in accord with the death-rate. The admissions to hospital would lead me to think that stone is less common there than in England, but the mortality would seem to be nearly double. This discrepancy is not easily to be accounted for, and I cannot help thinking either that imperfect discrimination of the causes of death has been made, or that, in the snatches of leisure during which I have compiled the table, some error on my part has crept in. I can conceive that, in the vast areas where population is small and surgeons are few and distant, many patients who in England would be cured in a hospital may in Scotland be allowed to languish and die of stone; but it is going too far to suppose that these considerations fully explain away the difficulty. Another mode of viewing the matter exhibits the discrepancy still further. Thus, in Scottish hospitals containing altogether 2151 beds, there were admitted in five years 171 stone cases. In English provincial hospitals, taken promiscuously (and not including Norwich), containing 2183 beds, there were admitted in five years 354 stone cases, or more than twice as many as in Scotland; while in seven London hospitals containing 1958 beds, there were admitted 229 stone cases: in other words, one stone case to about thirty beds in English provincial hospitals, one to forty in London, and one to sixty in Scottish hospitals. This matter, therefore, I leave for further and more careful investigation.

Table showing the Number of Stone Cases admitted into various Hospitals during Five Years, ending in 1873, with the average Age, Number of Cases under Ten Years, and the Proportion Yearly to whole Number of In-patients.

HOSPITAL OR INFIRMARY.	No. of Cases in Five Years.	No. below Ten Years of Age.	Average Age.	No. of Beds.	Proportion of Stone Cases to whole number of In-patients.	REMARKS.
Yarmouth Hospital	21	15	15	28	1 to 32	
Peterborough Infirmary	10	3	36	42	1 „ 53	
West Norfolk and Lynn	20	10	24	48	1 „ 124	Drinking-waters hard.
Children's Hospital, Norwich	9	0	0	20	1 „ 30	
Norfolk and Norwich Hospital	90	18	48	140	1 „ 55	
Lowestoft Infirmary	10	5	29	30	1 „ 77	
Wolverhampton Hospital	50	37	11	200	1 „ 101	A group of hospitals, in which a large proportion of cases are in young children; drinking-water very hard.
Birmingham General Hospital	61	18	32	256	1 „ 229	
„ Queen's „	30	15	23	198	1 „ 286	
„ Children's „	36	All	0	58	1 „ 116	
Coventry and Warwickshire	10	7	12	62	1 „ 110	
Dudley: Guest's Hospital	4	3	9	60	0	
Dudley Dispensary	13	10	6	0	0	
Leicester	44	17	32	210	1 „ 236	
Stafford	7	3	10	120	1 „ 518	Water very hard.
Shrewsbury	19	10	19	140	1 „ 262	Cases frequent on coal-formation; water hard.
Derby	8	0	27	175	1 „ 691	Water hard in places, whence stone cases come.
Nottingham	25	7	33	142	1 „ 263	Water variable; generally hard.
Lincoln	11	4	32	100	1 „ 339	Water generally hard.
Stamford	3	2	24	40	1 „ 425	Water decidedly hard.
Northampton	19	8	27	138	1 „ 402	Many waters of considerable hardness.
Huntingdon	10	3	36	42	1 „ 118	Drinking-waters unmistakably hard.
Cambridge	33	14	30	120	1 „ 122	Waters hard, containing a good deal of lime.
Colchester	4	1	38	94	0	Town waters hard; in villages rather soft.
Hertford	3	2	19	35	1 „ 250	Only five cases in twenty years.
Ipswich, Suffolk	15	0	0	90	1 „ 176	Water very hard.
Bury St. Edmunds, Suffolk	9	3	38	84	1 „ 223	
York	8	3	31	90	1 „ 412	Cases rare; water soft.
Hull	28	12	30	150	1 „ 230	Chalk soil; water hard.
Leeds	75	23	33	310	1 „ 202	Waters variable.
Halifax	12	3	39	50	1 „ 177	Water soft; some cases imported from other places.
Bradford	29	8	18	140	1 „ 141	Water not very hard.
Sheffield	17	7	23	160	1 „ 369	Not much stone; water soft.
Sunderland	11	2	20	110	1 „ 246	Water of moderate hardness.
Manchester	51	12	26	296	1 „ 302	Water of Manchester soft.
Liverpool Royal Infirmary	31	8	26	270	1 „ 564	Water from various sources; generally soft.
„ Southern Hospital	6	1	38	200	1 „ 1192	
„ Northern „	4	3	6	146	1 „ 2015	
Lancaster	0	0	0	70	0	No case for five years; very rare; water soft and pure.
Preston	6	1	47	76	1 „ 230	Stone cases rare; water soft.
Carlisle	8	0	37	52	1 „ 400	Cases rarely presented themselves.
Devon and Exeter	6	1	15	230	1 „ 1298	Water soft.
Barnstaple	3	2	8	100	1 „ 925	Stone cases rare; water hard.
Taunton and Somerset	0	0	0	92	0	No case for five years; only two in forty years; waters pure and soft.
Bristol Royal Infirmary	19	13	12	242	1 „ 665	Two in previous quinquennial period.
Hereford	2	0	0	74	1 „ 1560	Water rather hard.
Cheltenham	7	4	13	90	1 „ 395	Water hard.
Bath	12	8	14	120	1 „ 448	Water slightly hard.
Dorchester	3	0	12	60	1 „ 661	Chalk and green sand; water not hard.
Salisbury	7	1	31	100	1 „ 714	No case in five years; only seven in twenty-five years.
Ryde	0	0	36	0	0	
Southampton	12	6	22	100	1 „ 379	Water very hard from chalk.
Brighton	22	7	32	165	0	Water various; generally hard.
Reading	17	5	18	140	1 „ 298	Water hard.
Guildford	2	2	4½	54	1 „ 845	Water generally hard.
Canterbury	15	0	39	104	0	Water hard.
Dover	1	1	8	15	1 „ 795	Stone common in Kent.
Bartholomew's Hospital, Chatham	15	9	16	68	1 „ 156	
Edinburgh Royal Infirmary	61	10	0	565	1 „ 353	Water generally soft and pure.
Glasgow Royal Infirmary	60	18	25	584	1 „ 492	Calculus very rare; water soft.
Paisley	3	1	20	138	1 „ 1703	None; only eleven in thirty years.
Dumfries	0	0	0	100	0	Water generally soft.
Aberdeen	47	3	60	300	1 „ 184	None; stone very rare.
Perth	0	0	84	0	0	Both operations on same patient; water soft.
Dundee	2	2	9	260	0	No case in five years.
Inverness	0	0	0	130	0	
South Charitable Infirmary, Cork	10	3	38	108	0	None; only one in thirty-five years.
Monaghan	0	0	0	60	0	No stone case in either of the two hospitals for ten years; water hard.
Limerick	0	0	0	100	0	
Armagh	0	0	0	72	0	No case for many years; water hard.
Roscommon	0	0	0	85	0	Only three cases in 27 years' practice; water hard.
Maryborough	1	0	12	100	0	Only three cases in 20 years' practice; water hard.
Carmarthen	0	0	0	40	0	Stone very rare; no case for more than 7 years; water soft.
Haverfordwest	7	0	55	12	0	See THE LANCET, April 19th, 1873.
Bangor	2	0	12	14	1 to 172	Stone rare.
Swansea	4	0	28	55	1 „ 467	Water pure and soft.
Eight London Hospitals—viz.: St. Bartholomew's, Guy's, University College, St. Thomas's, St. George's, Westminster, Charing-cross, and Middlesex.	280	98	26	2866		

The sources from which the patients admitted into the London hospitals came were:—

From London and suburbs	125	From Bucks	8
„ Kent	37	„ Hants	7
„ Surrey	13	„ Yorkshire	7
„ Essex	10	„ Sussex	4
„ Wales	10	„ Lincolnshire	6

Others from scattered places.

Passing now to the second branch of my subject, permit me, before considering the causes of the excess of lithuria in this district, briefly to allude to its etiology and pathology. Although it is safe to assume that when lithic acid deposit frequently occurs in the urine, there is probably excessive secretion, we must not forget that a diminution of the alkaline bases, or over-acidity of the urine, will lead to deposit, without any relative excess. The conditions of health and disease in which these circumstances obtain are too well known to need notice; but I would ask, as bearing on this inquiry, whence is lithic acid derived? and where is it fabricated? Admitting that it is derived from the disintegration of nitrogenised tissues, and from the transformation of the excess of albuminous food, it yet remains a question where, or by what agency, it is actually generated; whether by the operation of chemical or electro-chemical changes in the blood itself, or in the tissues undergoing change, or by some secreting gland-cells in the liver, spleen, or kidneys. The office of the kidney, with reference to lithic acid, is still a moot question; is its duty simply that of passive elimination? or has it the higher function of constructing and forming the lithic acid, urea, and other principles, out of the materials presented by the blood? Ever since the discovery of urate of soda in gouty blood by Dr. Garrod, there has been a disposition to degrade the function of the kidney, and to allow that it consisted in little more than mere osmosis, and that it simply removed that which already existed. Admitting that urea and uric acid may be formed independently of the kidney, it would seem probable, looking at the fact that healthy blood contains merely a trace of urea and uric acid, and also that, when the kidney is extirpated, these substances do not accumulate in the blood, it would, I say, seem probable that, in the ordinary healthy operations of nature, it is the proper function of the kidney to form as well as to eliminate the 10 grains of lithic acid and the 500 grains of urea which a healthy man voids daily. We know that, in certain diseased conditions of the kidney, the power of eliminating these nitrogenous principles is lost, or nearly so; is it not possible that, in certain other morbid states, the opposite conditions obtain; and that, out of the healthy blood, the morbid kidney may form and eliminate an excessive amount of urea or uric acid? Who has not seen, in persons prone to the deposit of lithic acid, an enormous quantity, almost a teaspoonful, voided in a day? and that without any excess of diet, or sign of extreme waste of tissue, or obvious dyspepsia, or ill-health of any kind. If this excess of lithic acid existed in the blood, *quoad* urate of soda, surely the phenomena of gout would be present; but I have so often and so keenly watched this occurrence, and, failing to detect any of the usual etiological causes, it has appeared to me probable that, just as other secreting organs vary in the quantity and quality of the fluid they secrete, so the kidneys, owing to some inherent morbid condition, may form and secrete, out of healthy blood, urine having one or other of its constituents in excess.

But if, as I have said, there be a tendency to reduce the function of the kidney to that of mere osmotic elimination, I must notice the attempted elevation of another organ, the liver, into what I may call universal supremacy over all the healthy and morbid processes of nutrition and secretion. Not only has it the important glycogenic function and the secretion of bile, but it is also credited with the conversion of albuminoid matters from the blood, the food, and the tissues, and the formation of urea and uric acid. Arguing from the fact that urea has been found in the liver, and from some doubtful and controverted experiments showing that rather more urea was to be found in the hepatic than in the portal vein, and forgetful of the other facts that urea has been also detected in the brain, the lungs, and the spleen, and that only a mere trace is found in healthy blood, we are asked to believe that, out of these three functions there flow, in chief part, oxidation, sanguification, animal heat, and the depuration of the blood. It makes one almost stand in awe of one's liver, and believe that, having a liver, we could dispense with all other organs of digestion.

But if the liver be thus comprehensive as to its physiology, what has not been said as to its pathology? Passing by the structural diseases of the liver, which are well recognised and understood, the list of diseases and symptoms arising from mere functional disorder, as set forth by Dr. Murchison, the latest and stoutest champion of the pre-eminence of the liver in disease, is too long even for mention here; suffice it to say that it includes most of the disorders of all the systems of the body—of the nervous system, of the circulatory, respiratory, cutaneous, and urinary systems and organs; and even such acute diseases as pyæmia and the typhoid state are supposed to be frequently the result of functional disorder of the liver. In my student days it used to be said that he who understood the nature and treatment of inflammation had acquired half the knowledge necessary for a successful practitioner. Now it would be more correct to say that he who understands the nature and treatment of hepatic diseases has little more to learn.

On this view, gout, of course, is said to be a mere symptom of liver disorder, and the same is said of lithuria and all calculi composed of lithic acid or its salts; and the practical deduction inculcated by Dr. Murchison and also by Sir H. Thompson is that, in the treatment of gout and lithuria those remedies which are supposed to address themselves to the liver are to be preferred to those which diminish acidity and dissolve uric acid; that alkalies and alkaline waters are to be laid aside as inefficient, and, at the best, are but of temporary benefit, and that saline aperients and waters of that character are alone of real use. To this I would reply, judging from ample observation, that the saline aperient waters are not proved to act specially on the liver, that they probably act chiefly on the stomach and alimentary canal; that they are not so directly capable of removing gout or lithuria as the alkaline waters; and that, when they do so act, they, like the alkaline remedies, are evanescent in their effect. I have the conviction that this tendency to exaggerate the influence of the liver in health and in illness displays the drawbacks of specialism in the study of disease, narrows the view to one standpoint, and encourages the old but loose habit of attributing every obscure symptom to a "disordered or a torpid liver." On the whole, it is safer to attribute lithuria to dyspepsia and malassimilation, which probably concerns all the digestive organs, than to fix the fault mainly on one.

Undoubtedly, the general dyspeptic condition above mentioned, which, in the opulent classes of society, is generally caused by over-feeding and over-drinking, over-work, and deficient oxidation, and in the poorer classes by other sources of derangement, is the most fertile source of lithuria. This source, however, is common to all places and to most countries, certainly to all places of the United Kingdom; and yet, as I have shown, there is the greatest possible variation in the tendency to lithuria in various places. And this brings me to the concluding question—What explanation can be given of this variation, and especially of the excess of lithuria in this district?—and when I say excess, I desire to guard myself by admitting that, although there probably is excess, this is by no means proved. It may be that the abundance of stone in Norfolk is due, not to actual excess, but to circumstances which merely determine the precipitation and separation of lithic acid in the urinary tract. Whether it be so or not—and I know no means of deciding that point—the question equally remains. It has often been asked, but never answered, and never argued, except in a negative manner.

One thing appears to me clear and indisputable—the abundance or rarity of the diathesis must depend mainly on local and endemic causes, aided by another agency, which, however, grows out of the endemic cause. Further, these endemic causes must be due to the physical geography of the district, by which is meant the soil, food, and climate; and, when we call to mind how powerful is the effect of the physical geography of a country on the mental character, and on the civilisation even, of its inhabitants, we may well appreciate, if we cannot always explain, its laws in the production and spread of various diseases. This vast field of investigation has been cultivated by many distinguished labourers of late years, chiefly in the tracing of general constitutional diseases; but its capabilities for the elucidation of particular local diseases is not even now fully recognised; and yet it seems probable that further knowledge in this direction will not only demonstrate the etiology of many local diseases, but will direct into fresh and more accurate lines the study of their pathology, and even lead to more rational means of prevention and cure.

Taking these causes *seriatim*, the climate of Norfolk has

by many authorities been thought to be a powerful factor of lithuria. A glance at the map will show how much this county is projected, as it were, into the sea. From Yarmouth to King's Lynn is a very long coast-line, not less than seventy miles. During the winter and spring months, there is a great prevalence of north and east winds; and it is held that these bleak cold winds, by checking cutaneous secretion and deranging delicate digestion, cast additional work on the kidneys and liver, and so derange their functions and lead to lithuria. Dr. Prout somewhat favoured this view, and the late Mr. Crosse had a strong belief in it. Rigid investigation, however, will show that climate can have but the very smallest influence. Admitting that cold drying winds do prevail and are keenly felt in this county to a most unpleasant extent, it is not proved that they exceed those of other places. In the north of Scotland and in many of the exposed parts of Ireland the temperature must be as cold as it is here, and yet it has been shown that we have almost as many cases of stone as in all Ireland. Moreover, in hot climates, such as India, and in some parts of China, stone is not uncommon, while in Sweden and Norway and some other very cold countries it is very rare. Again, although it is the fact that we pass more lithic acid in winter than in summer, this is probably due to the greater muscular activity we use in the cold season, and to the consequent greater amount of tissue-metamorphosis. The natural effect of arresting cutaneous secretion must be to increase the amount of the water of the urine by which lithic acid and other solid constituents would be better held in solution, and so the liability to calculous deposit would be diminished; and, *per contra*, the increased cutaneous secretion from summer heat may be supposed to lead to concentration of the urine, and consequently to the liability of lithic deposit. The effect of cold is to diminish the acidity of the urine, and prolonged immersion of the body in cold water is said to render it alkaline. Observation, based on the localisation of 1500 stone cases in Norfolk, shows that fewer have come from the villages on the coast, where the exposure to cold is greatest, than from places more inland. These and other considerations which might be adduced did time permit, prove, I think, that climate alone has but little influence in producing lithuria.

The food of the poorer classes in this district, consisting as it does chiefly of good bread, cheese, and a small modicum of meat, chiefly pork, has, however, a speciality which has attracted attention, and has been assigned by many, notably by Prout, as a helping cause of stone. It consists of dumplings made of flour, water, and yeast, which may be described as boiled bread, and are universally consumed by the poorer classes with dripping or treacle. Those who think this article of diet conduces to stone give no other reason for their opinion than that it is apt to disagree with the stomach and lead to malassimilation. I cannot, however, admit the impeachment against the popular dumpling, for I do not believe that it is hostile to good digestion; it is never referred to by patients as a probable cause; and, when stone cases are admitted into the hospital, although in all instances remedies are prescribed of a nature likely to check lithic deposit, I never heard that the dumpling, which is a part of our hospital dietary, was forbidden. There is, however, one article of food—namely, milk—the want of which, in my opinion, does influence the development of lithuria very largely. More than twenty years ago it attracted my attention, and I dare say that of others, that stone in the bladder, which in the young children of the poor is so common as to constitute more than half the whole number of cases, is seldom or never met with in the more opulent classes of society. In some hundreds of cases of stone which have passed under my own observation, I have met with but one occurring in a child under five years whose parents were well-to-do in the world; and this experience has been corroborated by all those surgeons of whom I have made inquiry. To what is this marked contrast due? Mr. Thomas Smith, in a paper on the subject (*British Medical Journal*, vol. i., 1869, p. 442), summed up the probable explanation by attributing it to "insufficient and almost arrested cutaneous excretion from imperfect clothing and uncleanliness, tending to disturb the due proportion of the normal constituents of the urine, and lead to a relative or absolute excess of some one constituent; while the digestive organs of poor children are constantly liable to disarrangement from unsuitable food or from irregularities in their mothers' diet." Agreeing in the main with this account, I would go further, and say, that the prevalence of stone amongst the children of the poor is largely due to the impossibility of their obtaining a proper and sufficient supply of sound milk; the insufficient clothing and uncleanliness referred to probably exist everywhere, in Ireland and Scotland as much as in England, and yet Ireland has but little stone as compared with England. Again, in the table of hospital cases which I have compiled, the most remarkable differences with regard to stone in children appear. In the Midland Counties, a large majority of the cases are in young children, while in Aberdeenshire, where stone in the adult is common, there are but very few cases in children. In Yarmouth, a town on the east coast, 15 out of 21 were under ten years of age, while in Aberdeen, which is similarly situated, there were only 3 cases out of 47 under ten years. Referring to Dr. Edward Smith's report to the Privy Council on the food of the labouring classes, it appears that in Ireland, Wales, and Scotland, the poor obtain an abundance of milk, while in Warwickshire, Norfolk, Suffolk, Kent, and other places, very little is obtained. I am warned by time that I may not go more into particulars on this subject; but I affirm that strict inquiry shows that the abundance of stone in children of urban over rural populations, and of one district over another, will be found in strict accordance with the difficulty of procuring milk. The one exception mentioned is very corroborative of this view. A few years ago, after removing a stone from a child of well-to-do parents, I was remarking to one of my assistants that this was the first instance in my practice, and that I attributed the general absence of stone to milk; the mother volunteered the statement that, in a large family, this was her only child who never could take milk, and who, therefore, never had any. To this lamentable want is chiefly due not only this disease of stone, but probably a vast many of the diseases which attend the early years of childhood; which are prolonged into after years of imperfect development and early decrepitude. If ever true wisdom was combined with much false political economy, it was when John Stuart Mill maintained that those who live and labour on the soil have rights in the products of the soil beyond that of mere wage. It would, indeed, be a glorious result of statecraft if, instead of the futile wrangling over the sale of fermented liquors, which has wrecked one powerful Government, and, by the disappointment of greedy expectants, has gone far to sap the popularity of its successor; if, I say, by some equitable enactment, those who possess and those who occupy the land should be held responsible for the production, in sufficient abundance for the wants of the poor, of that which is now a costly luxury, but which nature points out to be the chief, I may say the only, need of early childhood.

One other fact connected with the food and beverage of this district deserves mention. The light but fertile soil of Norfolk is peculiarly adapted to the growth of barley, and I believe I am right in assuming that this is one of the greatest malt-making districts of the kingdom. One effect of this is, that beer is the common beverage of all classes. The labourer seldom touches spirits of any kind, but his libations of strong, sweet, new beer are liberal and often deep. The effect of malt liquor in provoking gout and lithuria is undoubtedly great, and, if we contrast the beer-drinking Norfolk peasant with the milk and whisky-drinking Irishman, we shall probably be right in attributing somewhat of the prevailing lithuria to this habit.

Associated with the soil is the geological structure. Stretching diagonally across the south-eastern part of the kingdom is the great chalk-formation, and Norfolk may be considered almost its centre. Close beneath where we now stand there is a thousand feet in thickness of chalk; it crops out on the surface, is visible in every pit, and impregnates the superjacent deposits where itself dips deep. Corresponding to this south-eastern chalk-district there will be found a large amount of lithuria; both the death-rate and the hospital records combine to prove this, and I have the conviction that a more minute inquiry than I have been able to make would demonstrate even a still closer relation than I have been able to show. What reason can be assigned for this striking correspondence? The only probable cause that I can discover lies in the character of the drinking-water, and the only peculiarity of the drinking-water is its excessive hardness. That there is an excessive

amount of carbonate of lime in water derived from the chalk will probably be readily allowed. Mr. Sutton, the eminent chemist of this city, has given me the analysis of eighty different sources of water, chiefly well-water, from various villages of Norfolk, and I find that the average hardness is 33° of Clark's scale; while, from forty Government analyses of water from different towns, the average hardness is 11°, and from sixty-five different sources supplied to Government by Dr. Letheby the average hardness is 9·2.° I am aware that water supplied by public companies is generally less hard than that derived from wells; and I admit that we are not in possession of sufficiently detailed analyses of local sources of drinking-water to justify very close deductions. Still the broad fact remains, and I know no other peculiarity likely to act as a probable cause. The drinking of hard water has long and often been held to influence the production and growth of stone; but I know of no explanation or argument in favour of it, except that of Prout, who says, "that hard waters, in conjunction with other favourable circumstances, have a great influence in producing stone, I have no doubt; they derange delicate stomachs very considerably, and have a tendency to produce lithic sediments, though they generally act by causing a deposit of the crystallised sediments or gravel in those disposed to them." I am not competent to discuss the chemical action of lime-salts in leading to lithic acid deposit; but I note the fact, that both lime and lithic acid are exceedingly insoluble; that there is no chemical affinity between them; and that, although lithate of lime has been said to exist in the mixed lithates so often seen, no calculus has ever contained it. Is it not, therefore, possible that the constant filtration of lime in excess through the system may encourage the separation and deposit of lithic acid in the urinary passages? In seeking information on this point, I inquired of all my correspondents as to the hardness of the drinking-water in the various districts, and I found very varying statements: many were sceptical as to its having any influence; but the balance of evidence was in favour of stone cases being connected with hard drinking-water. I have seen so many instances of persons who have come to reside in Norfolk rapidly acquiring the lithic diathesis; of others who lose the tendency immediately they leave the county, and of others whose tendency varied with their residence even in the district while the habits of living have remained the same; that I know not how to doubt the effect of the drinking-water on them. Against this view, it has been urged that, if hard waters had any effect, they would show it in males and females equally; that hard waters prevail largely over soft in most places, and that the drinking of hard waters predisposes rather to the oxalic and phosphatic than to the lithic diathesis. In reply to the first objection, it may be said that all influences act more powerfully on men than on women, and that renal, if not vesical, calculus is frequent among women; that, although three-fourths of all drinking-waters may be hard, the waters coming from the chalk may have some special peculiarity, and that, in other places, as in Ireland, the hard waters may be counteracted by other favourable circumstances of food or drink. Moreover, in the midland districts, where, I believe, the water is very hard, I have shown that stone is also very prevalent. As to the effect of hard water in leading to the oxalic or phosphatic diathesis, as described by Dr. G. Harley and Dr. Murray, I can only say that, in my experience, it is not the fact in this district. I have now operated for stone in nearly two hundred cases, and I can only call to mind three cases in which oxalate-of-lime calculi were removed from adults, and these were curious: in one the central half of the stone is pure uric acid and the outer half oxalate of lime, and this patient left Norfolk, probably with a uric-acid stone in his bladder, to reside in North Wales, and immediately the uric acid became covered with oxalate of lime; the second case was in a Norfolk man who also had resided out of the county; and the third was a private in a Dragoon regiment who had very recently come to live here.

I leave this question of the effect of hard waters, therefore, as an undecided one, requiring fuller investigation, and especially the tracing the absence or prevalence of stone in other countries and connecting it with local influences or endemic causes.

Lastly, I have to say a few words on hereditary tendency and family predisposition as a cause of stone in this country; and here I cannot help believing we have an influence acting slowly but potently. I can understand, and would maintain, that the hereditary influence must be slight as to its immediate effects, and must probably require the other favouring influences mentioned to act at all; but with them, in the course of generations and centuries, it would probably so grow and develop as to create in part the admitted abundance. Let me put the proposition in another way. Could we remove the present population of Norfolk into Ireland, and import the same number of Irish into Norfolk, it is probable that no great change would quickly follow in the respective manifestations of the lithic diathesis, but it is most probable that, in course of time, owing to the absence of endemic influences, the Norfolk diathesis would not maintain itself in Ireland, and the Irish substitutes here would as certainly acquire our tendency. I cannot appeal to statistics on this point, and therefore I may be excused for again referring to my own experience. I have never operated on a father and son, but I have very often traced the disease back to father and grandfather. In five instances I have operated on brothers, and in four other instances I have operated on one brother and other surgeons on another. Mr. Clubbe of Lowestoft has given us a curious history of a stone family. Three brothers were cut for stone by Mr. Clubbe; a fourth passed a stone; a fifth child died, aged three months, with every symptom of stone; a female child now has vesical irritation and bloody urine. The father and mother are constantly passing large quantities of lithic acid; the grandfather passed one stone, and the grandmother seven; a great-uncle was cut for stone, and six uncles and four aunts all suffer either with fits of gravel or from lithic deposits; and, to finish, a cousin passes calculi.*

There is considerable historical testimony in favour of this hypothesis. We know that Montaigne and his father both died of stone in the bladder, and we remember how he moralises on the incomprehensible wonders of the hereditary transmission of mental and bodily resemblances and infirmities. The celebrated minister, Sir Robert Walpole, and his brother Horace (who once represented this city in Parliament) were both afflicted with stone, and both resided in this county; and their mother also had stone.

What we know of the genesis and growth of stone would lead us to acknowledge both constitutional and local causes; and there is surely as much inherent probability in favour of its hereditary transmission as in that of gout, of cancer, or of scrofula. The difficulties in the way of admitting this influence in one case equally, or nearly equally, exist in the others, and are principally those which beset the whole question of inherited predisposition to disease. Dr. Richardson, indeed, objects to this theory, on the ground that stone is far less frequent in females than in males; whereas the tendency, he says, from the parent should pass alike to male and female. To this it may be replied, that the same influences which govern the transmission of gout chiefly in the male issue are equally dominant in the case of stone; and these influences consist in the harder living and the harder life, the greater exposure, and the rougher work of men beyond women. Besides, although the relative proportion of *vesical* stone in males and females is about 25 to 1, it is far less disproportionate as regards *renal* stone. I cannot, of course, give the relative proportion in the latter case; but it is unquestionably the fact that renal calculus in the female is common in this district.

Time warns me to conclude. Permit me to sum up by saying that in every part of the British Isles there is, so to say, a film of lithuria; that constitutional and individual causes act everywhere; that, in some places, local and endemic influences co-operate to thicken the film into a decided layer; in others, the constitutional tendency is counteracted by the local conditions. In this particular district, the local favouring influences consist, to a very trivial degree, in the cold climate; in the universal consumption of malt-liquor; possibly, I will even say probably, in the constant daily use of exceedingly hard drinking-water; and, lastly, in the accumulated effect of hereditary predisposition.

I cannot, however, pretend, in what I have written and read to-day, that a full and complete explanation of a very interesting and important fact is to be found. The subject is so abstruse in itself, so mixed up with profound physiological and chemico-vital processes, so intimately associated

* See THE LANCET, July, 1872.

with what essentially we know so little about—viz., the nutrition, the growth, and the decay of tissues and organs—that, in the present state of knowledge, we must, I fear, admit our darkness, and search and strive for increased light. I may, however, hope that I have stimulated, if I have not satisfied, the desire for fuller information; and if, by the help of such additional facts as have been adduced, and by the exposure of some errors and vague theories, the future search for truth may be made easier, I am content to believe that towards this end I have made a slight contribution, and have not wholly wasted a golden opportunity, or overtaxed your indulgent patience.

REPORT ON
THE ISSUE OF A SPIRIT RATION DURING THE MARCH TO COOMASSIE.

BY E. A. PARKES, M.D., F.R.S.,
PROFESSOR OF MILITARY HYGIENE IN THE ARMY MEDICAL SCHOOL.

(*Communicated by the* DIRECTOR-GENERAL OF THE ARMY MEDICAL DEPARTMENT.)

IN accordance with the desire of the Director-General, I have brought together the evidence I have been able to collect on the issue of a spirit ration in the late Ashantee campaign. I need not refer to the gravity of the question whether, under the particular circumstances of the Gold Coast campaign, the issue of rum was desirable or the reverse. If the question could be completely answered, which is unfortunately not the case, it would be of great military importance.

Sir Garnet Wolseley adopted in this brilliant campaign the following plan:—Rum was carried with the troops, but was only issued on the recommendation of the medical regimental officers during the march from the coast to the Prah, and on the recommendation of the principal medical officer with the forces after the Prah was crossed. When issued, the quantity was half a gill (equal to 2½ fluid ounces), and it was given in the evening after the fatigues of the day.

In seeking for evidence on the effect of this issue, I thought that the most reliable opinions would be given by those medical officers who had actually marched with their men to Coomassie, and on whom the responsibility of the issue was at first thrown; and I therefore applied to Dr. Troup, surgeon of the 42nd Regiment; to Mr. Wiles, surgeon-major of the 2nd Batt. Rifle Brigade; and to Dr. Allen N. FOX, who marched with the part of the 23rd Regiment which landed,—for information on this point.* And I have to thank these gentlemen very cordially for the information they have kindly put at my disposal.

The points on which I particularly requested information were as follows:—1. If any teetotalers were with the regiment, how did they compare with their comrades in marching power and in resistance to malaria? 2. In the case of the men who were not teetotalers, how did the issue or the non-issue of rum affect them? And what was the general conclusion as to the desirability, or not, of a rum ration which the history of the march led to?

I also asked, as a matter of course, for the opinion of Sir Anthony Home, who, though prevented by illness from marching to Coomassie, made all the medical arrangements, and who studied with the greatest care all the points connected with the preservation of the health of the men. My friend Dr. Kynsey, who was with the 1st Field Hospital, has also given me some important evidence, and has forwarded also the valuable opinion of Surgeon-Major Jackson.

I also thought it desirable to take down the evidence of some intelligent non-commissioned officers who made the march, and I shall give their evidence in their own words. I took the non-commissioned officers whom I found at Netley, and who were mentioned to me as intelligent and trustworthy.

* Dr. Fegan, who marched with the Naval Brigade, being on service on he coast, I have been unable to obtain his evidence.

The evidence is arranged in the following order:—

From Dr. Troup, 42nd Highlanders.
„ Mr. Wiles, 2nd Batt. Rifle Brigade.
„ Dr. A. N. Fox, 23rd Welsh Fusiliers.
„ Sir Anthony Home, Deputy Surgeon-General.
„ Dr. Kynsey, 1st Field Hospital.
„ Sergeant-Major Barclay, 42nd Rifles.
„ Sergeant Kemp, 2nd Batt. Rifle Brigade.
„ Sergeant Baker, „ „
„ Sergeant Perrin, Army Hospital Corps.
„ Corporal Rose, „ „
„ Corporal Haidley, „ „

After adducing this evidence, I shall venture to state the impression it has made upon me.

EVIDENCE FROM THE 42ND REGIMENT.

Letter from Dr. TROUP.

Portsmouth, May 8th, 1874.

Having instituted inquiries regarding the number and health of the teetotalers of the 42nd Regiment while engaged in the late campaign of 1874 to Africa, I have compiled the enclosed table. I have brought together all the information I can, taking their previous medical history from the Medical History Sheets. This table shows a very favourable state of health, even under very adverse circumstances, there having been but little sickness amongst them. A large proportion of them have served in India, and suffered there from tropical ailments. I cannot overlook the fact that, taking the life of the soldier under every circumstance, the total abstainer or temperate man has the advantage, preserving his health better, and performing his duty better, and in his older years withstanding climatic influences which, as a younger man, upset him. Some of the soldiers recorded in the return have displayed wonderful health on the West Coast of Africa even under extreme fatigue and exposure. I hope this table may corroborate in some degree the good that may be effected by temperance. Most of the men recorded are personally known to me. A large proportion are men of exceptionally good physique, and I feel quite sure that, with their good intentions and actions, personal good has followed, and a proportionate advantage to the State.

My opinion all along has been the same, and our little war of 1874 has corroborated it, that while men are careful to be temperate they are more careful in other respects, and not so open to those abuses on the line of march which in many cases open the door for disease, and, in the end, give rise to so much mortality and invaliding in the service. This table shows a large proportion of non-commissioned officers and old soldiers, whose experience is worthy of being recognised—and who have taken to teetotalism, some from the want of control, others from the opinion that indulgence in alcohol is hurtful, while others have taken to it from their great susceptibility to its influence, when taken even in moderation. The influence and example of such men must be all-powerful in regulating the conduct of the young men who are drafted into the service, a large number of whom, in the 42nd, come from country avocations in Scotland, born of respectable people, and many of whom on first joining have never indulged to any extent in drinking, and some of whom have never even smoked. This class of recruit, who has never tasted of the dissipation of a town life, can at once be recognised on the primary inspection, presenting alike a good physique and purity of respiratory and circulatory systems, and far superior in every particular to the generally dissipated townsman, with his bloodshot eye and his throbbing and over-excited heart. To such, then, coming from his country home to a life so new to him, a continuance of temperate habits, aided by the example of his superiors, would be fraught with the greatest possible advantage both to himself and the State. During my service I have often had to lament the results of incipient drinking in the young soldier, crime generally commencing with it, and in company, or soon after, disease, the two, as it were, joining hands together; whereas the young and temperate recruit is but seldom seen by the medical officer either in confinement or in hospital. It is a recognised fact that the Medical History Sheet will tell what the Defaulter Sheet is, and if we trace the cause we generally find it to be intemperance. While, however, supporting total abstinence, or at least abstinence from alcoholic stimulants, as rum &c., as part of the soldier's allowance in ordinary times and under favour-

able circumstances, I am at the same time of opinion that rum has been useful to a certain extent in our little warfare, where the daily routine of his life has been so altered and under exposure to a bad climate, with its depressing effects; where daily fatigue had to be endured under unfavourable influences so foreign to his existence; where moisture and heat, with great exposure to sun by day and cold and chilly nights, with but partial covering for him, united in producing those depressing and enervating results which were readily seen in all. I think the experience of a large number

Nominal Return of Non-Commissioned Officers and Men of the 42nd Royal Highland Regiment ("The Black Watch") who were total abstainers while engaged on the Gold Coast.

[The names and rank are omitted.]

No.	Age.	Service &c.		Number of admissions during expedition in Africa from Jan. 3rd to arrival in England.	Medical History and Remarks.
		Years' service.	Former service abroad.		
1	34	16	9 years in India	None	No hospital admission since 1862. Acted as quartermaster-sergeant during war. Never sick.
2	37	19	11 " "	Once	Suffered from dysentery of acute form, fever of remittent type, and general debility, with hepatic derangement. Very much exposed to climate as hospital sergeant.
3	38	17	9 " "	None	While in India suffered from fevers of continued remittent and intermittent types. No hospital entry since 1864. Used to drink hard.
4	34	16	9½ " "	None	This soldier while in India never suffered from fever. One admission for ebriositas in 1867; since then never in hospital.
5	32	14	7 " "	None	Suffered from primary and secondary syphilis and fever of intermittent type in India. No admission since 1868.
6	23	5	None	None	This soldier has never been in hospital either at home or on Gold Coast.
7	34	15½	8 years in India	None	Frequently in hospital while in India with fever of intermittent type, also venereal. During the past four years has never been in hospital.
8	37	17	10 " "	None	Medical history sheet shows only minor ailments. A strong, healthy, and powerful man. Earned the V.C. on Gold Coast expedition.
9	27	3	None	None	Medical history sheet blank. A tall and powerful, well-built soldier.
10	33	10	3 years in India	None	Four admissions from ardent continued fever in India; otherwise nothing.
11	23	5½	None	None	Several attacks of gonorrhœa in 1871; several attacks of primary syphilis in 1872. No other entry worthy of record.
12	41	17	10½ years in India	None	Suffered from primary syphilis, date of which not known; secondary syphilis followed in 1863, and some affection of eye noted as "cæcitas." Since then no admission.
13	36	16	9 " "	None	Suffered several times from fever, remittent, intermittent, and continued, in India. No admission since 1865 till 1870, when he had a bad attack of erysipelas.
14	34	14	6 " "	None	A large medical history sheet. Suffered from dysentery, acute and chronic, and intermittent fever and continued. No admission after 1870.
15	40	15	8 " "	None	An old soldier, and only fit for hospital duties. He was employed as hospital orderly during expedition. Suffered from fever and acute "liver" in India; but very healthy in Africa, and never fell out, though he was hard worked.
16	37	15	5½ " "	None	Previous admissions from minor complaints. Very healthy.
17	23	3	None	None	Never in hospital during his soldier's career. Marched all the way.
18	20½	3	None	Once	During latter part of 1873 suffered from a severe attack of enteric fever, and suffered from diarrhœa on his way home.
19	19½	1½	None	Once	A young soldier, who was left behind on the march to Coomassie, and was sent on board ship, suffering from inflammation of lung.
20	27	10	None	None	Only two admissions, and then from minor ailments.
21	22½	3½	None	Once	No medical history. Only one entry in medical history sheet.
22	22	2	None	None	No medical records of admission into hospital.
23	20½	2	None	None	Never in hospital.
24	23	3½	None	None	Marched all the way. No medical entry worth recording. Acted as a hospital orderly.

of medical officers engaged during the expedition would bear me out, provided precautions were taken to give the rum at a proper time, when the system had supported its calls, and after the fatigues of the day; for while care and abstinence were necessary during the heat of the day, I am convinced that a little spirit, well diluted, proved beneficial, and while aware that the advantage, if it may be so called, is only temporary, yet its use had a tendency to allay that depressing irritability which I found was so liable to upset the best when exposed to climatic influences so foreign to his nature.

I hope I have not overstretched the point, but my experience led me to justify the issue of rum. When first we landed in Africa it was ordered that rum was only to be issued under exceptional circumstances of exposure and fatigue, an order which held good as far as the river Prah, up to which point on our journey rum was only occasionally recommended. After this, however, when we crossed into the enemy's territory, and we left many comforts behind, and of necessity more exposed, rum was, as a rule, daily issued, given after the evening meal, and in a diluted state, and with the precaution that each man should receive his allowance at the tub, to prevent those refusing it giving it to their comrades. On one occasion only I recommended an issue of hot rum in the case of a party left behind marching late in the day, and missing their way, and not reaching camp till nearly 10 P.M. In this instance I think an allowance of rum and hot water, with cocoa afterwards, proved beneficial, enabling the party to march with us next morning at an early hour, and with a very fatiguing march before us. One thing especially struck me. I happened to be near the place of issue of rum the first occasion it was given. I observed many of the young soldiers taking only about half their allowance, others refusing, while all the older soldiers from fifteen to sixteen years' service looked as if they would be none the worse of another, after being particularly careful to have their allowance in full. A remark made by a staff officer engaged in the Red River expedition was very suggestive (on this occasion rum was not issued). He said, "We lived on the climate then, but here the climate lives on us." No truer remark could have been made, for, on all alike, officer and soldier, the climate was telling. The system looked as if it were undergoing a gradual decay; the excessive amount of cutaneous perspiration and the great loss of muscular vigour caused a blanched and anæmic appearance. In many cases an unusual depression of spirits followed as well as irritability of temper. This I noted more especially after the excitement was over, and when we had to march over old ground with but little change of scenery, passing through forest and jungle of a very monotonous character, and in our journey through which we were unable to get a glimpse of the horizon, I may say from Cape Coast Castle to Coomassie. Regarding my experience of the use of stimulants among the officers: one officer was teetotal—a young officer, who suffered once or twice from fever of a mild character, but who went all the way and marched regularly with his company; a few other officers were very abstemious, drinking only the lighter clarets—one of them a very young officer. These also stood the climate well; but that blanched and anæmic appearance presented itself, and, although performing their duty, evidently making an effort to do so—their young and undeveloped systems struggling with the climate. The majority of the officers preferred the use of stimulants in moderation, and then after the fatigues of the day, and taken with and after the evening meal. I may mention the case of my little mess, consisting of the officer in command, the quartermaster, and

myself. We thus used stimulants with and after our dinner meal. We all three marched to Coomassie and back; never felt sick or sorry, although as staff we had many calls on us day and night, and I am of the three the only one who has suffered, having been attacked with remittent fever on my landing in England, but this happily passed off in four days under the daily use of quinine in small doses.

(Signed) B. W. TROUP, M.B.,
Surgeon, 42nd Royal Highland Regiment ("The Black Watch").

Portsmouth, May 8th, 1874.

(To be continued.)

A CASE OF URETHRAL CALCULUS INCARCERATED BETWEEN TWO STRICTURES; EXTERNAL AND INTERNAL URETHROTOMY; GOOD RESULT.

BY W. F. TEEVAN, B.A., F.R.C.S.,
SURGEON TO THE WEST LONDON HOSPITAL, SURGEON TO ST. PETER'S HOSPITAL, AND LATE LECTURER ON ANATOMY AT THE WESTMINSTER HOSPITAL.

THE following case is one of much interest, not only on account of the rarity of its occurrence, but also from the different operations required, and the fact that the calculus simulated a traumatic stricture.

William C——, a powerful, healthy-looking stoker, aged thirty-three, gave the following account of his complaint:—When only thirteen years old he was kicked in the perineum, which caused "an awful lot of blood" to come from the penis, and the testicles to swell, but no difficulty in micturition followed. He caught a gonorrhœa when twenty-one years of age, and was long troubled with a gleet; both complaints were treated by medicines only. Ten years ago he began to be troubled with difficulty in passing his water, and went into the Southampton Infirmary, where his stricture was gradually dilated up to No. 11. During the treatment a very small calculus passed from him one day, and about two years ago he withdrew another small stone in the eye of his catheter, and was attacked with rigors a few hours later. On Feb. 6th, 1874, the patient sought my advice at St. Peter's Hospital on account of the increasing difficulty in micturition and the incessant calls to urinate, which forced him to discontinue his work. With some trouble I was enabled to pass a small olivary elastic bougie into the bladder, and to determine the existence of apparently three strictures by external manipulation. One of them was situated in the perineum, another behind the scrotum, and the third in the penile urethra, just in front of the scrotum; and each was about half an inch long. Between Feb. 14th and March 14th, the patient paid me seven visits, but I was only able to pass a bougie two sizes larger than on the first occasion, and I advised him to allow me to perform internal urethrotomy, to which he readily consented; and on March 28th he entered the hospital for the purpose. He was kept quiet in bed, and the perineum was well leeched, which enabled me to dilate the first stricture sufficiently to permit me to divide it with Civiale's instrument, on April 8th, in the presence of Mr. Heycock, &c. The patient, who stood up against the wall when the operation was performed, said he suffered but little pain. Only a few drops of blood escaped, and no rigors ensued from the passage of the urine over the freshly divided mucous membrane. I now tried to dilate the second stricture, but without success, and, on May 2nd, I introduced a fine whalebone bougie into the bladder, and used it for a guide for the catheter urethrotome described by me at p. 724 of THE LANCET for May 23rd. Before passing the knife into the urethra, I moved the supposed stricture up and down on the staff, and thus discovered that it was a small calculus, although it had been looked upon as a well-marked specimen of traumatic stricture by those who, like myself, had hitherto examined it externally, without the assistance of a metal instrument in the urethra. I at once passed a urethral forceps and grasped the stone, and managed to bring it forward to about half an inch in front of the scrotum. As I was unable to withdraw the calculus, I introduced Nélaton's urethral "brise-pierre," but I could not get the male blade home, and tried without success to extract the stone by means of the beak of the female blade. I then gave the instrument to Mr. Heycock to hold, whilst I slid the skin away from the raphe one inch to the right, and removed the calculus through a small incision in the median line.* The skin was now allowed to roll back to its normal position, so that the external incision appeared to be at the side of the penis, and not in the median line where it had really been made. No instrument was left in the urethra, and no rigors followed. Two days later I passed one of the smallest elastic catheters into the bladder, and tied it in for twelve hours, in order to rapidly dilate the deep stricture. On May 6th, four days after the operation, the wound was quite healed. The patient left the hospital on May 23rd, passing No. 14 French catheter, with ease, for himself. His stream of urine was of normal size, and he could hold his water all night, and for four hours in the day. He called on me on July 28th, when he passed No. 16 in my presence. As the deep stricture is very tough, and the introduction of a full-sized catheter a procedure of some difficulty attended with pain, I have recommended the patient to allow me to divide it when he can spare the time to enter the hospital again.

The case presents some important clinical features. When the patient first came to me no metal instrument could be passed, but a small whalebone bougie could be introduced into the bladder with some difficulty, and, although it felt tight, it gave no evidence of the presence of a calculus. Even when the first contraction had been divided no stiff catheter could be insinuated through the second obstruction, and had it not been for the great assistance afforded by the whalebone bougie in enabling the catheter urethrotome to be slipped over it the true character of the apparent second stricture would not have been cleared up, as the calculus was embedded in a recess, and when a metal instrument was passed down to it no click was elicited. With all the facts of the case now before me, I would say that the anterior stricture was, from its nature, the result of the long-standing gleet from which the patient had suffered; whilst the posterior one in the perineum was caused by the kick. How was it, then, that the calculus was arrested by the more recently formed stricture instead of by the older one? The answer is not difficult, I think. Calculi are usually stopped in their descent in the anterior portion of the canal simply because it is much narrower than the deeper portion. When the stone had advanced as far as the front stricture the deeper one still went on contracting, so that it could neither come forward nor recede. The calculus was extracted by an external valvular incision, and the wound was healed in four days. Now, one of the objections to the performance of external urethrotomy in the penile urethra is the alleged probability of the formation of a fistula, but this may be entirely obviated by adopting the manœuvre I have described. The skin of the penis is so loosely connected with the fibrous envelope of the organ that it can be easily shifted to a great extent in any direction. Thus it was that, although the cicatrix is to be seen one inch to the left of the raphe, it was in reality made in the median line so far as all the tissues, save the skin, were concerned. The case also demonstrates a surgical point, now generally accepted, to the effect that no instrument need be left in the urethra after internal or external incision, for neither rigors nor abscess occurred after the operations, although no catheter was left in on either occasion.

Portman-square, W.

* The stone was phosphatic, olive-shaped, and weighed, when dried, twelve grains. It measured three-quarters of an inch long, and just filled No. 23 hole of the French gauge.

EPILEPTIC HEMIPLEGIA.

BY J. CRICHTON BROWNE, M.D., F.R.S.E.,
MEDICAL DIRECTOR, WEST RIDING ASYLUM.

UNDER the title of epileptic hemiplegia Dr. Todd described a number of cases in which transient paralysis of one half of the body followed convulsions of the epileptic kind, generally limited to the side which became paralysed, but sometimes involving the whole body. Combating the crude and easy pathology which would ascribe such hemiplegia, as well as all other obscure brain symptoms, to local congestion, he argued that it ought to be attributed to a state of exhaus-

tion and weakened nutrition in the deeper strata of the white matter of the hemispheres, in the corpora striata, and optic thalami, induced by the morbidly excited polarity of these and other parts, upon which he believed the epileptic paroxysm to depend.

Dr. Hughlings Jackson, in reviewing the clinical facts as to the association of paralysis with convulsions, so accurately observed by Todd, has offered another explanation of them, suggesting that the temporary loss of power is caused by the strong discharge of the cerebrum in which the fit consists. Numerous cases verifying by their phenomena Dr. Hughlings Jackson's theory are continually falling within the experience of those who see much of nervous diseases, but a certain number of cases are encountered for which it does not, at first sight, adequately account. He has himself referred to and dealt with one class of such cases, in which the paralysis precedes the convulsions; and there is another class, well worthy of attention, in which the paralysis follows the convulsions, but is not temporary but gradually progressive, advancing at a rate determined by the number and severity of the convulsive seizures. In this class of cases Dr. Todd thought that weakened nutrition had been continued into a state of white softening. There was a tendency, he believed, in the fit-exhausted brain towards that variety of degenerative change which, when it involved the convolutions, compromised mental power and induced dementia, and when it involved the ganglia at the base of the encephalon compromised muscular power and induced paralysis. Unfortunately for this view, however, post-mortem examinations, in some cases in which progressive hemiplegia has resulted from epilepsy, have not discovered any softening, but rather an opposite condition of induration, affecting both convolutions and ganglia. There has been no atrophy in these cases, for the brain has looked as if increased in bulk, swelling out when the skull was removed; there has been no excess of serous effusion, no vestige of clot, no tumour; and the difficulty has been to find something to account for the hemiplegia. The fibroid induration which Dr. Bucknill's remarkable investigations first taught us to recognise in epileptics, and which was present in such cases, has seemed to be generally diffused throughout both hemispheres, and has not therefore appeared available as an explanation of palsy of one side, until some recent experiments of my own have shown that appearances, as regards this pathological change, are deceptive, that it is not so generally and equally diffused as has been supposed, and that it may affect the two hemispheres in very different degrees. One striking case, which occurred in my practice some time ago, illustrated very clearly the possible dependence of hemiplegia upon a hyperplastic overgrowth of connective tissue in the brain chiefly involving one hemisphere, and afforded a clue to the relation subsisting between the discharging and the destroying lesion when epilepsy eventuates in paralysis. It presents so many interesting features as to justify a full report.

Mary N——, aged thirty-three, single, needlewoman, from Leeds, was admitted to the West Riding Asylum Feb. 10th, 1871. She was said to belong to a healthy family, untainted by nervous disease. Her mother died of old age, in her seventy-eighth year, and her father of emphysema when aged sixty-six. She had never sustained any injury to the head, nor suffered from any serious illness, having been indeed exceptionally healthy up till her nineteenth year, when she was suddenly attacked by epilepsy, for which her friends could suggest no more probable cause than the sedentary habits necessitated by her occupation. From her nineteenth up to her thirty-third year fits of considerable severity occurred from time to time, and gradually, in spite of various methods of treatment adopted, became more frequent, and sapped her mental powers. For twelve months previous to her admission to the asylum she had had one or two fits every second day, and had become stupid and quarrelsome, without, however, exhibiting any distinct exacerbations of excitement. When admitted, she was described as rather below the middle height, of dusky, sallow complexion, and plump and well nourished. A conversation with her proved that her memory was greatly circumscribed, that her power of apprehension was defective, and that all her mental processes were slow and laborious. Her muscular movements were seen to be clumsy and uncertain, and it was remarked that she was right-handed, but by no means dexterous in either writing or sewing. Both pupils were dilated, and there was a growth of hair on the chin and upper lip. The heart-sounds were feeble, the lungs healthy, and, according to her own statement, subsequently confirmed, the catamenia regular.

The first fit in the asylum occurred on Feb. 12th, two days after admission. There was no warning of its approach, but on its incursion the patient raised both hands behind her head, screamed loudly, fell over, and was violently convulsed, principally on the left side. Her head was drawn to the left, and clonic spasms affected the face, neck, left arm, and left leg, spreading subsequently and in a less degree to the right arm and leg. During the seizure the tongue was bitten, and after its cessation there was a prolonged period of unconsciousness, followed by confusion and bewilderment of thought lasting some hours. All the numerous fits through which Mary N—— afterwards passed were nearly identical in character with that just described. In all of them the clonic spasms chiefly affected the left arm and leg, which were soon found to be decidedly weaker than the limbs of the opposite side. The grasping power of the left hand was less than that of the right to a very perceptible extent, and the left leg was dragged heavily in walking. This weakness of the left side gradually increased until there was drooping of the left shoulder, and a distinct halting gait. Immediately after her admission to the asylum, indeed on the 12th February, the patient was put under the bromide of potassium treatment, and was ordered to take thirty grains of that salt thrice daily. For a time this remedy seemed to have but little effect, as the fits recurred with their customary frequency, though perhaps with scarcely their customary violence. Up till the end of February there were ten fits, during March there were eighteen, and during April eighteen. Then, however, a striking improvement was inaugurated. In May there were only six fits, and in June and July there were none. A continued immunity from fits, accompanied by augmented mental power and nimbleness, was enjoyed up till Aug. 21st, when, however, the pent-up torrents began to overflow. On that day there were two fits, and on the 22nd, 25th, 27th, 28th, and 30th there were also two. On Sept. 1st there was one fit, and then came a temporary lull until the 8th, when the genuine eruption commenced with three fits, followed on the 9th by five, on the 10th by ten, on the 11th by twelve, on the 12th by thirteen, and on the 13th by fifteen, causing continuous unconsciousness, and placing the patient, indeed, in the status epilepticus. That was the climax of the attack, and from that point subsidence commenced. On the 14th there were no fits, on the 15th ten, on the 16th eight, on the 18th nine, on the 19th six, and so on by gradual stages of diminution until the 30th, when only one fit occurred, and when the patient seemed to be nearly restored to her usual condition. In October there were no fits, and in November there was only one comparatively trifling explosion, extending from the 10th to the 14th, and including fifteen fits distributed over these four days. During the early part of December there were no fits, but on the 17th of that month the final explosion began. On that day there were six very severe fits, on the 18th there were two, on the 19th one, on the 20th four, and on the 21st twenty. A state of stupor had been induced by the fast-coming fits. The patient could not understand what was said to her, but remained in a drowsy, half-conscious state, with saliva trickling from her mouth. Stimulants failed to rouse her, and after fifteen more fits on the 22nd, she again passed into the status epilepticus, marked by deep coma, hurried stertorous breathing, livid features, upturned injected eyes, fixed dilated pupils, profuse perspiration, and a small feeble pulse, beating 120 times per minute. During the 23rd there were no fits, but the coma continued unmitigated, and exhaustion was obviously setting in, notwithstanding the copious supplies of nourishment which were being administered by the stomach-pump and by injections. On the evening of that day it was thought advisable to resort to dry cupping, as ice to the spine, sinapisms, ergot, &c., had failed; but during the operation a fit came on, and in the fit breathing ceased, and artificial respiration had to be kept up for some time before breathing was re-established. During the 24th there were fifteen fits, with ever-increasing exhaustion. On the 25th her pulse was almost imperceptible, her bronchi were loaded with mucus,

and her face and neck were of a dull-purple colour. She remained deeply unconscious, and died on the morning of the 26th, at 1.30, the convulsive movements up to the last having been always most marked on the left side, which continued to be partially paralysed.

(To be concluded.)

CASE OF INTUSSUSCEPTION IN AN INFANT, ENDING FATALLY.

By CHARLES J. CULLINGWORTH, M.R.C.S.,
SURGEON TO ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, MANCHESTER.

On the evening of the 27th July, 1874, Mr. and Mrs. C—— left Blackpool by train for their home in Manchester, bringing with them their baby, a fine healthy boy, fifteen weeks old. During their fortnight's sojourn at the seaside the child had been in his usual health, except that his stools had been somewhat curdy and of a greenish colour, which the mother attributed to the change of milk. Half an hour from the time of starting, the baby awoke from his sleep, and vomited rather violently. Immediately after the attack his mother called the father's attention to a sudden change which had taken place in his appearance: he looked sunken and pale, "like death." During the remainder of the journey, which occupied two hours, he was restless and fretful, uttering, almost without cessation, an unusually weak, piteous cry. I saw him very soon after his arrival at home, and found him still collapsed, the surface was blanched, cold, and perspiring; the features sunk, and the pulse feeble. He closed his eyes for a few seconds, and then roused himself suddenly, as though in pain, with the weak, painful cry which his parents had before noticed. I told them that I feared a sudden displacement of the bowel had occurred. He was immediately wrapped in a small blanket wrung out of hot water, and then enveloped in a dry outer blanket and laid upon a couch. A teaspoonful of milk, to which a drop or two of brandy had been added, was ordered to be given every ten minutes. He died, however, without rallying, at 5.30 A.M. on the 28th, not quite nine hours after the symptoms were first observed.

An examination of the body, twelve hours after death, revealed an invagination of the ileum, an inch and a quarter in length, situated at about its central portion, and lying deeply and posteriorly on the right side of the abdomen. The displacement was from above downwards. There were no external signs of inflammation, either in the part itself or in its neighbourhood. Wishful to preserve the specimen, I left the parts undisturbed, except that the inner fold was withdrawn (with the exercise of some force) to the extent of two or three lines, when it was observed to be distinctly congested, especially at its upper margin, where there had been some constriction. The stomach and upper part of the small intestine were a good deal distended with flatus, but were otherwise healthy. The canal had not been occluded by the displacement; for brandy and milk were found, apparently unchanged, in the parts below, and, indeed, the father assured me that a little had passed per anum.

MEETING OF PUBLIC ANALYSTS AT CANNON-STREET HOTEL.

A numerously attended meeting of public analysts took place at Cannon-street Hotel on Friday, August 7th. The chair was taken at a little after 4 o'clock, by Prof. Redwood, who opened the proceedings in a sensible and temperate speech. He pointed out that the meeting had been convened for the purpose of considering the Report of the Select Committee on the Adulteration of Food Act (1872), and of suggesting amendments to that Act. A printed draft of resolutions to be submitted to the meeting had been sent round some days before, and to this the chairman referred. These resolutions were then put to the meeting *seriatim*. Many verbal amendments were inserted, and some fresh resolutions were added, and ultimately, after full discussion, the great majority were carried almost unanimously.

The first discussion arose in regard to the proposed reference to Somerset-house Laboratory in disputed cases. Dr. Dupré pointed out that the certificate of a public analyst had very seldom been proved to be wrong, and that magistrates very rarely refused permission to have a second analysis made in the interest of the tradesman. If a court of referees must be established it would at any rate be necessary that the actual analyst should be present at the adjourned trial, and should give his evidence on oath. Mr. Wanklyn took a similar view, asserting that a reference to Somerset House would be a reference from a higher to a lower authority. He argued that only one court of reference would be desirable—namely, a court consisting of the public analysts themselves. Mr. W. L. Scott, Mr. Allen, and Mr. Blyth also supported, in the main, this view of the case.

The third resolution had reference to the proposed examination, in doubtful cases, of candidates for the post of public analyst. Universal objection was expressed to the proposed selection of South Kensington as an examining centre, but it seemed to be generally admitted that some very loose appointments had been made, and that cases must from time to time occur in which some definite test should be enforced. Dr. Tripe was warmly supported in his suggestion, that any such test should not be retrospective in its action, while Mr. Heisch proposed that a certificate of having worked two years in the laboratory of any competent analyst should be accepted as a qualification. Mr. Bell urged that if a board of examiners were established, it should consist entirely of public analysts. It was ultimately settled that either a sufficient probation in an analytical laboratory or the passing of a suitable examination should be esteemed a qualification.

The vexed question of the facing of tea followed, and produced a lively discussion. Mr. Scott, Mr. Jones, Dr. Dupré, Mr. Burge, and Dr. Tripe objected to facing as an adulteration, and as such to any legalisation of it. On the other hand, Mr. Heisch, Mr. Wanklyn, Dr. Stevenson, Mr. Allen, and Mr. Estcourt urged that the facing of green tea, as usually practised, did not materially affect the quality or the value of the tea, and, at any rate, that it would be undesirable or even impossible to arrest the practice suddenly.

Mr. Wanklyn suggested that the ash should not be permitted to rise above 7 per cent., equal to about 2 per cent. of facing, and this suggestion was ultimately carried by a narrow majority.

The next resolution dealt with the question of mixtures. After one or two verbal alterations had been discussed, it was decided that such mixtures should be labeled, and that the percentage of the ingredients, under the name of which the mixture is sold, should be stated prominently on the label, any excess of foreign matter being considered an adulteration.

One or two resolutions referring to the duties of inspectors were then carried with little opposition, and finally an Association of Public Analysts was formally established, with Professor Redwood for president, and a committee consisting, as we understood, of Messrs. Allen, Bernays, Dupré, Escourt, Hassall, Heisch, Stevenson, Wanklyn, and Wigner. Another meeting is to be held before long, and in the meantime the committee has undertaken the difficult task of preparing a definition of the term "adulteration," and some resolutions to be founded upon it.

We abstain from any comment in this place on the conclusions reached by the new Association. Some of them we cordially endorse, while from others we differ; but we congratulate the public analysts of England on the action they have taken, and wish them every success in their enterprise.

Donations, &c., to Medical Charities.—The executors of the will of Mr. John Bagshawe, of Tideswell, have paid £500 to the Devonshire Hospital, Buxton, and the General Infirmary, Sheffield, respectively. The Wolverhampton and Staffordshire General Hospital has become entitled to £500 under the will of Miss Ann Stubbs, of Walsall. The Kent and Canterbury Hospital has received £462 10s. from "J. M., on behalf of a friend."

THE LANCET.

LONDON: SATURDAY, AUGUST 15, 1874.

THE annual meeting of the British Medical Association is not likely to fail of its usual pleasantness in the ancient city of Norwich. Norwich is a place which we should all like to visit on the score of its intrinsic and historic interest. And it has a good character for hospitality. Besides, it has a fame in medical history, in connexion with such names as Sir THOMAS BROWNE, CAIUS, MARTINEAU, RIGBY, CROSSE, and others—a fame which is well sustained by living men in each branch of the medical profession. In addition to all this, there was much in the scientific programme of the meeting that was attractive. We hope next week to notice the leading addresses in the principal sections. In the opening address of the President, Dr. EDWARD COPEMAN mooted, if he did not settle, some questions of great medical interest, and others of much public importance affecting the State relations of medicine. He expressed strong objection to the course taken by the Local Government Board in various parts of the country in appointing or recommending the appointment of particular district medical officers as officers of health. He expressed his preference for a system which would make every district medical officer under the Poor Law the officer of health for his own district, with extra pay for the responsible duties which would thus be added to his ordinary duties. In connexion with this system he does not seem to have indicated with sufficient clearness the provision of a satisfactory mutual relation between these numerous district officers and—what is still more important—their relation to the central sanitary authority. Without this, every man would be doing what was right in his own eyes, and preventive medicine would be kept in a state of chaos and inefficiency. Dr. COPEMAN spoke with much force and good sense on the functions of the Association. The Association has been apt, very naturally, to regard itself as a political power that should always be trying to influence Parliament on questions affecting the interest of medical men or the medical interests of the public. This kind of function has a great charm for the few men who represent the Association during the interval of its meetings. And it is, of course, a very important part of the functions of a medical Association. But we cannot help thinking that if the Association devoted more of its income, which in the last year was £8511, and of its energy to scientific purposes—to the development, as Dr. COPEMAN suggests, of the science of physiology and that of therapeutics,—it would be more effective as a political influence, and at the same time fulfil its higher duties. What a splendid result might be obtained if the President's suggestion were acted on—all the members making definite therapeutical observations, to be directed and collated by a committee for publication. We will not measure the interest of the Association in researches in aid of medicine and the allied sciences by the amount which it purposes to give in the coming year: £200 out of £8000 is a kind of discouraging encouragement to therapeutists. It is a practical admission that whatever the purposes to which the large income of the Association is applied, the furtherance of scientific investigation is not one of them. The presidency of Dr. COPEMAN will not be unremembered if it gives a more scientific and systematic character to the energies of the Association; and if the Council comes to regard each member, not as a mere annual subscriber, but as a co-operator in scientific research.

THE mere mechanical effects of embolism have, during the last few years, engaged the attention of certain of the continental pathologists, and more especially of COHNHEIM. Formerly it was sufficient to know that clots carried into the vessels of the lungs, if of large size, generally produced sudden death, or at least speedy death, preceded by urgent dyspnœa; that small clots did not necessarily give rise to symptoms, although they might form the centres of infarcts easily to be discovered after death at a later period. It was sufficient to know that a sudden obstruction to the middle cerebral artery was liable to be the cause of sudden or speedy death, if not of changes which might be almost worse than death. We knew, too, that the sight of one or both eyes might be seriously affected if not lost by the plugging of the central arteries of the retina; that gangrene often followed the occlusion of the main artery of a limb. With the knowledge of these and other similar facts concerning embolism we were for a long time content, not having sufficiently noticed the apparent eccentricity of the process in almost always affecting certain organs or structures, whilst others were seldom if ever the seat of similar disease. This peculiarity was noticed by COHNHEIM, who, within the last two years, has published his investigations on the subject. To accept the whole of his theories on the mechanical effects of embolism would be at present far too hasty, especially as experiments made chiefly on frogs can scarcely be considered a fair criterion or guide to processes occurring in the human body. Nevertheless, he has drawn attention to the great importance of two factors in the production of the various effects of emboli—the anastomoses of arteries and the presence or absence of valves in the veins. Where free anastomoses take place, says COHNHEIM, the effect of a plug is merely to cut out a small portion of blood-channel from the circulation, but not enough to produce any easily-noticed effect upon the surrounding tissues; unless, indeed, the plug be impacted in a vessel above the point of anastomosis. But where there are not free anastomoses between the larger vessels, as in the brain above the circle of WILLIS, the eye, lungs, spleen, and liver, the effects are more or less disastrous according to the quantity of blood cut off. The precise character of the changes produced will depend in part upon whether there be free access of air to the part, and upon whether blood can find its way into the affected region through the veins. For the hæmorrhage of an infarct is due in a peculiar manner to the relation between this regurgitant blood and the vessels, not to the increased pressure of circulation immediately around the obstructed artery. COHNHEIM's explanations are ingenious; and, although the theory may not be correct throughout,

the main fact of the free communication of vessels is probably of the greatest consequence in the study of embolism. In a work which appeared before Cohnheim's, Feltz occupied himself in an elaborate inquiry into the effects produced by capillary embolisms. One or two patients having perished somewhat suddenly with symptoms indicative of obstruction of the pulmonary vessels, Feltz was surprised at not finding the large plugs which he had expected. A further search, however, led to the detection of tiny clots in the capillaries of the pulmonary vessels; and the detection of these led the pathologist to perform a number of experiments with a view to ascertain if it were really possible that death could be due to the sudden and extensive plugging of the minute vessels of the lungs. The injection into the veins of fluids containing finely pulverised substances did certainly produce sudden death; the substances were found in the pulmonary capillaries. Proof might be deemed to be complete. Further experiments were performed to discover the effects of similar plugging of the capillaries of the general circulation; and the results appear to have equally satisfied the author. It is much more difficult, however, to persuade impartial observers of the truth of a theory which seems to oneself beyond doubt. We cannot but see that in the experiments of Dr. Feltz it is most difficult to prevent the introduction of other dangerous substances than finely pulverised tobacco or fibrine; and that the sudden filling of a large number of capillaries with minute emboli presents certain difficulties in the ordinary condition of parts.

The theory of embolism has been generally accepted by English pathologists, but with more reserve than the continental pathologists have shown. We are not so ready to accept every case of plugging of vessels with clot as due to conveyance by the blood. Humphry and Playfair have with justice stated their belief that many of the so-called cases of embolism are in reality none other than thrombosis; that the causes which lead to the clotting of blood in one vessel may lead to the same condition in another vessel; that clotting of the blood may be so rapid and so extensive as to produce effects as marked as those produced by embolism. In many cases, of course, it is easy to discern the difference between a thrombus and an embolus; but that this is not always so may easily be understood when the time which has elapsed between the formation of one and the other is short, and when death is of speedy occurrence. We know, too, how difficult it is to assign any precise period for the formation of clots found in the heart after death—clots which are supposed to have gradually formed during a slow death, but which appear sufficient often to have been the actual cause of death. Playfair's paper referred especially to cases of thrombosis and embolism following labour; and the cases which appeared to fall under the former heading occurred much more quickly after confinement than those which belonged truly to the latter disease. However this may be, the main facts of the two diseases remain the same, such discussion only tending to show how closely they are connected.

In the practice of medicine and surgery we are in the habit of calling to our aid means of cure which often appear as dangerous as are the diseases of which we wish to rid our patients. So it is that, dangerous to life as is embolism, the attempt has yet been made to employ it in the treatment of aneurisms which have been set down as incurable by other means. The *manipulation* of aneurisms, as proposed by Sir William Fergusson, had for its object to detach a clot from the interior of the sac and float it into the vessel beyond the seat of the dilatation, in the hope that by this means the current of blood might be materially diminished and a cure caused. It could scarcely have been hoped that so precarious a means, and one so little capable of direction, should become generally employed. Indeed the results were not sufficiently good to cause the treatment to be generally pursued, the artificial embolus proving to be quite as intractable as that formed in the ordinary course of disease.

We have advanced far in the pathology of embolism; we are daily improving in our power of diagnosing the disease. But unfortunately we do not seem to have made equal strides in the direction of treatment. Rest, nutritious diet, diffusible stimulants, are recommended. But we know of no means at present to dislodge the foe when once it has taken up its position. Yet it is not impregnable, provided we can only keep life in the body for a sufficiently long period. Pathology has taught us that such clots may in time be removed, although the process of removal is not without its attendant dangers in the possible detachment of fresh portions from the softening mass. Should the patient escape the first attack of the disease, we may hope that all may yet go well. We have still to fear, however, the secondary clot which forms about the embolic nucleus, and still to fear that fresh emboli may be detached from the original thrombus. Rest, therefore, profound rest, is enjoined; and all means are taken, with due respect for this first requirement, to improve the condition, and so to place the patient beyond the likelihood of a new formation of clot.

There are other lessons, too, which we may learn from the study of this disease. Wherever there is a thrombus, embolism is a sequel which must be remembered, and averted if possible. The too careless examination of veins supposed to be filled with clot may at any time be sufficient to detach a portion and float it off into the circulation, to be deposited again we know not where. The rough handling of aneurisms may be equally dangerous, and cannot be too strongly warned against. Rest for those who are the subjects of thrombosis, no matter to how slight a degree, is the natural lesson which we learn from the history of many cases; the danger of sudden or violent movement can never be too much insisted upon. As in venous thrombosis, so in endocarditis, especially in the more recent conditions of valvular disease, the same teaching is the natural conclusion which we draw from experience. But we may go one step further than this. There are many conditions in which thrombosis does or may exist, although we cannot actually be sure of the fact. There are other conditions in which the general state of the patient is favourable to the more or less rapid clotting of the blood. Such conditions we find, either combined or separately at work, in badly comminuted fractures, in persons much emaciated, or in those who have lately been confined. In all such cases, rest, tenderness and all imaginable care in treatment, the removal of all

sources of irritation, the maintenance or improvement of the general condition, are the indications which will suggest themselves to every practitioner, and which should be religiously performed and maintained.

PROFESSOR SPENCE took advantage of the occasion of the recent ceremony of graduation in the University of Edinburgh to deliver his views on certain questions in medical politics relating to medical education and examination. The duty of delivering an address to the new graduates in medicine devolved on Professor SPENCE. As those who know him would expect, he spoke many words of wisdom and good counsel to the young graduates. But Professor SPENCE is disturbed by the unceasing demand for medical reform. He seems to look on the Act of 1858, as Lord RUSSELL was said to regard the Reform Act of 1832, as a "finality" measure, one that rendered all further concern on the part of the Legislature about the qualification of medical practitioners and the way in which they procured their qualifications unnecessary. He is especially severe, or means to be so, in his objection to conjoint boards. It takes a great man to realise the necessity of more than one reform measure in his own lifetime. Most men, after one such measure, say to themselves: "It is over now; we may make all our arrangements accordingly, and dismiss the fear of further change." After 1858 "I trusted that all that remained to be done would be effected gradually and safely under the powers which the Act conferred. My trust was, however, misplaced. Ere we had got into working order under the new system, before it had a trial, demands were made for more medical reform, as it is called, especially as to medical education and examination." These are plaintive notes, very unlike the hearty Saxon words in which Professor SPENCE'S late colleague, Professor SYME, used to advocate a single portal system. In regard to the demand which seems most to distress Professor SPENCE—that for a discontinuance of the system of examination by nineteen rival bodies and the formation of conjoint boards,—it may be some comfort to him, as a believer in the Act of 1858, to be reminded that that Act contemplated and authorised the formation of such boards. Clause 19 distinctly provides that *any two or more* of the colleges and other bodies mentioned in Schedule A to the Act may unite or co-operate in conducting examinations required for qualifications to be registered under the Act. Professor SPENCE may think a little more of the principle of conjunction when he is reminded that it is suggested by the Medical Act, which he praised much, he tells us, in his address to the graduates in 1865. Those who are, at some sacrifice to their own medical Bodies, trying to establish conjoint boards, are proceeding strictly in the lines of the Act of 1858. Not only so. They are trying to remove a scandal which, notwithstanding Professor SPENCE'S words to the contrary, had become a subject of public and parliamentary complaint. The complaint is temporarily in abeyance, because it is understood that the bodies are endeavouring to unite and to co-operate, and because public attention has been directed to existing examinations with some good effect. Professor SPENCE'S objection to conjoint boards is a very poor one, borrowed from Dr. LYON PLAYFAIR, and it is refuted by his own statements. He says that what appears to be desired by the advocates of conjoint schemes is "a dead-level uniformity." What they really desire is that a student shall be thoroughly examined in all the branches of knowledge essential to a general practitioner, and that after being so examined he shall receive a complete qualification. Formerly, and before the agitation to which Professor SPENCE objects so much, surgical bodies used to examine only in surgery and medical bodies only in medicine, as if a surgeon could fitly be ignorant of medicine, and *vice versâ*. Now these bodies examine in all branches of the profession. But their qualification is still incomplete, legally, but most unjustly. There is no possible defence of the system which requires a student to pass two identical examinations before he can get completely qualified. If the level of a thorough practical acquaintance with medicine, surgery, and midwifery is a dead level, then the promoters of conjoint schemes are promoters of a dead level. But to apply the expression "dead level" to uniformity of acquaintance with facts a knowledge of which is indispensable to a practitioner is to be inaccurate. Professor SPENCE himself, later on, says that a conjoint board would have to subdivide itself and distribute its work, and then "where would be the uniformity?" We should suggest his putting this question to Dr. LYON PLAYFAIR, who is the author, as far as we remember, of the dead-level argument. What is wanted, we repeat, is a system of examination which shall secure, on the part of successful candidates, acquaintance with facts a knowledge of which is indispensable to the practitioner. Any amount of variety may be permitted and encouraged with this basis, but not without it. A candidate was lately discovered at a medical board, who had successfully passed the examination in anatomy of the Royal College of Surgeons, who held peculiar opinions about the site of the spleen, insisting that it was situated in the right hypochondrium. We want an examining system which will bring this man, whatever his other merit, to a "dead level" with the rest of the world as to the position of the spleen, and in the meantime keep him, with all his originality, out of the profession.

Professor SPENCE propounds some serious views of his own on the real remedy of the evils of the present state of medical education and examination. His great suggestion is—an extension of the period of education, especially of hospital studies; and the introduction of the tutorial system of teaching into hospital schools. He does not say a word against the existing system of teaching by lectures, than which few things are more inefficient. We are glad to agree with Mr. SPENCE as to the advantage of tutorial teaching. But his great proposal of an extension of the period of medical education is simply unpractical. It would greatly add to the expense of entering the medical profession without necessarily adding to the efficiency of the entrants. Mr. SPENCE objects to the interference of the State in medical questions. So do we. But the State must have practitioners. And if medical education is to be made still longer and more costly than it is, the State will interfere in its own interest. Before such a serious remedy is entertained as the extension of time, the effect of a better use of the time at present allowed will have to be tried.

EXACTLY a year ago we had to animadvert rather pointedly on the neglect with which everything relating to the public health had been treated by a Liberal Government. Sanitary legislation on a national scale was left as incomplete and inoperative as ever. The Adulteration Act remained practically ineffective. Mr. DALRYMPLE'S Bill for the treatment of dipsomaniacs was postponed to the Greek Kalends, after its main provisions had been emphatically approved by a commission specially appointed by Government to consider it. Medical Reform was simply mentioned to be superciliously dismissed. Nor was passive indifference the only delinquency chargeable on the Government. In the person of Mr. STANSFELD it deliberately pursued the policy of utilising the profession while ignoring its scientific opinions. It gave superior powers to officials who had yet the alphabet of hygiene to acquire, while it heaped studied indignities on its medical functionaries. It took every opportunity of parading its intention to work the sanitary business of the nation on the principles of the old Poor-law Board's administration of the workhouses and infirmaries. Its sudden and disastrous fall in the ensuing spring evoked small sympathy from even those of the profession who shared its political views; while expectation stood on tip-toe to see whether the leader of the Opposition would redeem, when in power, the pledges he had made when out of it. ASTRÆA has indeed returned, but there are as yet but few signs of the Golden Age. Doubtless the *res dura et regni novitas* have much to do with her comparative sterility; and we should have been satisfied with an indication that her early promise would some day be fulfilled. But even that has been withheld. Urban, rural, and port sanitary authorities, with their medical officers and sanitary inspectors, are still struggling on, sorely perplexed and dismayed by the inevitable result of Mr. STANSFELD'S administrative policy. We do not pretend to prophesy how many months or years will elapse before the present state of affairs will cease to exist and the work be commenced anew, and after a different fashion; for the evil is not so much that things that ought to have been done have been left undone, as that things have been done that ought not to have been done. This by the way. We look forward hopefully to the reinstatement of Mr. SIMON in his proper position, and meanwhile have to record that the sanitary legislation of the parliamentary year comprises two Acts—the Factories (Health of Women &c.) Act, and the Sanitary Laws Amendment Act. Both were carried through successfully; the former will come into operation on the 1st of January next, and the latter has already become law. The Factories Amendment Act, the provisions of which were fully described in THE LANCET of June 6th, is a piece of legislation tending still further to place—and, as we think, properly—restrictions on trade in the interests of health; and its main object is to prevent the overworking of women and children. Objections were taken to the Bill as it affected women, because it appeared to interfere somewhat with the liberty of the subject; but this argument might of course with equal justice be used in respect of School Boards, Sanitary Acts, and a crowd of other enactments made to promote the well-being of the general community. The Bill was strenuously opposed by Mr. FAWCETT, but without success. We believe that the provisions contained in the Act will work well for factory children, but have again to register a regret that it contains no restrictions whatever for prohibiting women from working in factories almost immediately after their confinement, to their own physical injury and that of their children. The Sanitary Laws Amendment Act is worth more than at first appears, although it has been roughly and in some respects unjustifiably criticised as a fragmentary piece of legislation. However, as the loaf is not at present obtainable, we accept gladly the first crumb that falls. A *résumé* of the chief provisions of the Act will be found in THE LANCET of June 20th, and there is great hope that it will simplify action on the following points:—(1) The closing of wells or pumps, public or private, that are so polluted as to be injurious to health; (2) the nature and extent of hospital accommodation; (3) the destruction of bedding or clothing that has been exposed to infection; (4) the search for unsound food or drink; (5) false representations with respect to the present or recent existence of infectious diseases. All these provisions relate to most important items of sanitary legislation; but, as treated in the Act before us, the initiation of proceedings must entirely depend upon the Local Government Board, which retains as usual the power to set this or that clause in motion by issuing an Order upon the subject.

Mr. BRUCE'S Liquor Act has been virtually adopted by his successor, while his additions or modifications are of doubtful value. A Commission has sat on the Adulteration Act, whose report we have not scrupled to describe as faulty, erroneous, and mischievous. And with these few and feeble efforts the sanitary legislation of a Government pledged to put public health in the foreground is "all told." Obscurely indeed, and by implication, Mr. DISRAELI returned to his sanitary programme in his speech at the Mansion House. But he made no reference to it in the Speech from the Throne; so that, as matters now stand, we are in much the same position—or rather predicament,—as regards the public health, as we were precisely a year ago.

Medical Annotations.

"Ne quid nimis."

PAUPER INFANTS IN THE BRENTFORD UNION.

LAST week we had occasion to remark upon the therapeutical views of guardians, illustrated in strapping down an aged pauper delirious and dying from pneumonia. This week we have to notice the hygienic views of another board—that of the Brentford Union. The particular point brought under the notice of the public in *The Times* is the management of young children by the Brentford guardians. Their views are as original and peculiar as those of the Holborn guardians. Shortly stated, the practice of the Brentford guardians has consisted in shutting up seventeen children, between the ages of two and seven, in two small ill-drained attics for nine months, under the care of two paupers, one an aged woman, known as "Granny," the other a young woman, mother of two illegitimate children. The poor little children have not been out of their prison certainly for nine months, probably for a longer period. The moral treatment of the children is quite of a piece with the

physical, and they seem to be denied all kind of education, except such as may come spontaneously, or from poor old "granny" and her worthy subordinate. It is difficult to write with becoming serenity on such a state of matters. The one great happiness and advantage of the children of the poor, is their liberty. "The chartered winds beat about them." And though in winter, with their scanty clothing, they sometimes suffer from this freedom, death and disease come much more certainly to them if they are shut up in badly ventilated rooms. The cubic space of their dwellings may be as limited as in the attics at the Isleworth Workhouse, but they break away from them. The instinctive love of fresh air and open space carries them forth into the streets or neighbouring fields, and keeps them there, more or less, till night. But here is a prison crowded and foul, and it is full of children, deprived by authority, for no crime, of space and air, and having ophthalmia, struma, and all sorts of misery manufactured in it. Not only have the Brentford guardians allowed this system, but when it is exposed they defend it, and have the audacity to quote medical doctrine in its favour. In deference "to the noise made about" the children, they have permitted them to have the air. But, amid much laughter, the guardians have ironically discussed the purchase of twenty perambulators and the engagement of as many nurses. The vice-chairman has distinguished himself by vindicating this system of management. We must give his own words:—"After all the fuss there was nothing in it, for the most eminent medical men would tell them that warm-blooded animals ought not to be exposed too much to the air, and that infants were better kept in." We must leave critics to say whether this defence is most to be admired from the scientific or the humanitarian point of view. We confess that, for the nonce, we are too "warm-blooded" to write coolly on the subject. Of course we shall have an inquiry by the Local Government Board. But how is it that this exposure has not come from the Local Government Board? How is it that such matters never are discovered, or at least disclosed, by the Local Government Board? To do guardians justice, we could, up to the time of this disclosure, not have believed any Board capable of such treatment of children as this. There is a conceivable excuse for guardians going wrong in the treatment of pneumonia, but that men who are presumably parents, or who at least see children daily dancing in the open air, could use their authority to keep seventeen of them imprisoned for nine months, is an act of which we could not, in the absence of history, have thought them capable.

"RAILWAY CASES."

A GREAT amount of moral courage is required to utter the words "I don't know," and it has undoubtedly been the besetting sin of our profession in all times to assume a knowledge though we have it not. When a man has reached a position of great eminence in his profession, and when he is placed in the witness-box and speaks through the newspaper reporters to the whole of England, it must be very hard indeed to say "I don't know"; for the British public are not always ready to discern that a medical opinion ought always to be in some degree a logical conclusion which has to be deduced from a certain number of facts; and if the facts from which the conclusion is to be deduced do not happen to be present, the public are not likely to applaud him who adheres to the canons of logic rather than him who lacks moral courage, ignores logic, and indulges in dogmatic assertions. It behoves the heads of the profession to set us a good example, but we cannot admit that the extreme readiness shown by some of them to give their opinion upon purely subjective phenomena is likely to raise the profession in the eyes of the scientific public. Two cases were reported in *The Times* of the 6th instant, in which damages were claimed for railway injuries. The usual undesirable display of course took place, and the usual difference of opinion between men of considerable eminence called forth the usual remarks from counsel and from judge. In both the patients the symptoms were mainly subjective—pain, loss of power, and mental disturbance. Of course witnesses had every right to hold their own opinions as to what part of the symptoms was assumed and what was real, and we doubt not that the same difference of opinion in the interpretation of subjective phenomena would have been manifested in the wards of a hospital as in the witness-box. The public, however, cannot understand why this difference of opinion should exist, and it is not unfrequently attributed by them to most unworthy causes. It is not every opinion which we may express in a clinical lecture that we ought to be ready to back so strongly as to give it positively from the witness-box. And it would be a source of real satisfaction to us if we could hear of some negative conclusions being occasionally arrived at in these cases. Messrs. A, B, and C have carefully examined Mr. D, and they regret that from the symptoms manifested by him they are unable to come to any certain conclusion as to the nature or cause of his malady (if any), nor as to its probable duration.

CORONERS AND DOCTORS.

IT is not often that the power possessed by coroners of selecting medical men to give evidence and make post-mortem examinations is unwisely exercised, but the course of action pursued recently by the coroner for Jarrow has been of such an exceptional character as to call forth remonstrances from the jury, the local press, and the medical profession in the locality. A child some twenty days old died suddenly, and an inquiry was held as to the cause of death. We do not gather from the somewhat meagre report of the proceedings in the local newspaper that the child was seen during life by any medical man; but, the child being dead, the coroner seems to have summoned to his aid a medical man from Sunderland (although the profession has some six or eight representatives in Jarrow itself), who "examined" the child, and *without making a post-mortem examination*, arrived at the conclusion that the deceased died of "want of proper nourishment," to which conclusion he was probably helped by the evidence of the mother, who stated that the child had been fed mainly upon arrowroot, and had had a teaspoonful of castor oil every other day since it was five days old. The jury returned a verdict in accordance with the evidence, and the foreman then took occasion to tell the coroner "that considerable dissatisfaction was felt in the district at a doctor from Sunderland being sent to these cases, and referred to the case of a man named Cowan who died the previous week, and had been attended by a Jarrow doctor and pronounced dead, and yet a Sunderland doctor was called to make the post-mortem examination and get the fee, while the Jarrow doctor got nothing." The coroner replied that he would not be dictated to, and would select what doctor he pleased.

THE METROPOLITAN POLICE.

THE annual report of the Chief Commissioner of Police of the metropolis, which has just been printed, gives a very favourable account of the work of that important force. The chief surgeon reports a slight increase of sickness among the men under his care, and also an increase in the number of cases for which sick or detached leave was granted. Rheumatism, coryza, bronchitis, and tonsillitis are, as usual, the most prevalent diseases of the force. One

hundred and two policemen were admitted to the various public hospitals, and of these 11 died. The total deaths in the force were 44, and the total strength of the divisions being 9465, the percentage of deaths was only ·46. On the subject of venereal disease, Mr. Holmes writes as follows:—

"Eighteen men were reported as suffering from venereal disease during the year, and one of them being judged to be unfit for further service was compelled to resign. All men known to be affected with venereal disease are suspended and struck off pay while unfit for duty. Two of these men, however, were admitted into the Lock Hospital, on grounds which were, of course, satisfactory to the managers of that institution. The police authorities do not subscribe to that hospital, nor do I ever recommend the admission of a police constable. If a man was so seriously affected as to render his admission medically necessary, I should judge him to be also medically unfit to continue in the service."

We must confess to failing to see the good policy of an arrangement by which venereal disease is concealed instead of being cured as quickly as possible, the patient being deprived of his medical adviser at the moment when he most wants him, and being also deprived of the pay which would enable him to secure medical advice for himself. The constable suffering from venereal disease ought, in our opinion, to be treated by his own divisional surgeon, and if the pay of that officer is not sufficient for this, let the patient be put under stoppages. The present system merely drives the men to apply in plain clothes at our hospitals and dispensaries.

A complaint we frequently hear from the surgeons of outlying divisions of police is that personal attendance at Whitehall-place is necessary for the receipt of the quarterly stipend. Surely a cheque or post-office order might take the place of the old-fashioned warrant.

HUDDERSFIELD INFIRMARY.

IN the report read at the annual meeting of the governors and friends of the Huddersfield Infirmary a few days ago, reference was made to the ever-recurring question of the abuse of out-patient relief. The Weekly Board of the institution, while, as they allege, sparing no pains to ascertain the nature of the cases presented to them, still have to regret the frequency of complaints of the recommendation and consequent admission of patients whose character and circumstances render them unfit recipients of the benefits of the charity. The Board, rightly we believe, indicate the remedy to consist chiefly in greater circumspection on the part of those who give recommendations.

The new north wing, opened on Whit-Monday last, is expected to be ready for occupation in about three months. This addition to the building will result in doubling the capacity of the infirmary for the reception of in-patients, and will make possible certain economical arrangements in the administration which have long been desired. New dormitories are being constructed over the main front of the building, and it is satisfactory to find that the sum (£8000) necessary to cover the cost of these accessories, as well as of the new wing, has already been nearly subscribed. The workpeople of Huddersfield, however, would appear, in liberality, to be behind their fellows in Leeds, Glasgow, and other places; for whereas in these towns increase of wages has been followed by greatly augmented donations to hospitals, in Huddersfield the excess of receipts from the workpeople this year over last has been very small, the whole annual sum contributed by them, indeed, being but £125 14s. 7d.

For three years the beneficent work done at the infirmary has been supplemented and consummated at the Convalescent Home in connexion with it. This Home has, by the generosity of Mrs. Brook, been rendered more efficient and complete by the addition of a farm of some fourteen acres, upon which a dwelling-house and other buildings have been erected, and which offers means of healthful and interesting occupation to the convalescents. This is a feature which, so far as we know, is peculiar to the institution in question, but which is, we think, worthy of being made a note of by those who take a practical interest in the multiplication and increased utility of Convalescent Homes.

THE WILL OF SURGEON-MAJOR JOHN WYATT, C.B.

To those who knew the late surgeon-major of the Coldstream Guards, the information contained in the paragraph about his will, which has gone the round of the papers, will not have caused any surprise, for it was quite in keeping with the character of the man. Be this as it may, however, we consider some of the deceased officer's directions to have been very sensible and good, more especially those in which he deprecated the employment of all those adjuncts to a funeral, and semblances of respect and grief, which are but "the mockery of woe." It is surely time that a practical protest should be made against the intolerable tyranny of a custom which benefits the undertaker and his myrmidons at the expense very often of a widow and impoverished family. The loss that death causes is often an irreparable one, and it must then happen that it entails great sorrow and suffering; but St. Paul's view and the world's view are very different. The apostle emphatically reminds us that we are not to mourn as those without hope; but the ceremony of a Christian's burial in this country is scarcely in accordance with what, on Christian principles, it should be. Most of us would desire that our deaths should cause as little pain as possible to those we loved and those by whom we would be kindly remembered; and every man and woman that possesses a heart worthy of the name of one, would loathe the idea of being outwardly mourned by those who did not inwardly regret or respect them. So far, then, as the directions in the will to this end are concerned, we cordially sympathise with them; but as regards some others, and the publicity that has been given to the occurrence, we do not feel called upon to say anything.

ÆTAT. 111.

MR. THOMS had better inquire into the case mentioned in *The Times* last week of one Betsy Leatherland, who, born in Chinnor, in Oxfordshire, on the 24th April, 1763, is now alive, at Tring, with sight, hearing, and speech but slightly impaired, and still able to earn a livelihood by making nets. We confess we should like some more than merely parochial authority as to the identity of the old woman at Tring, whose parentage was gipsy, and who, after a wandering life of twenty-two years, married a soldier in a marching regiment, and shared his fortunes for another thirty years. Professor Owen has demonstrated that from the period at which the epiphyses of the long bones coalesce with the diaphyses, and, further, from the laws of tooth-supply, the life of a species has an allotted length; that Professor Flourens' assertion, that in the absence of disease and under all favourable conditions, man might survive as long after the procreative period (ending, say, at seventy in the male) as he had lived to acquire maturity and completion of ossification (say thirty years), is quite consistent with physiology; but that, at the same time, no centenarian has been fairly proved to have reached 105 years, the legends of Henry Jenkins, the Countess of Desmond, and Old Parr notwithstanding. The centenarian at Tring must, we fear, have something in common with that old Irish peasant woman who had persuaded herself and her clergyman that

she had been favoured with a third set of teeth; while on being examined by Professor Owen, her new tooth was found to be neither more nor less than a solitary old tooth-stump protruding through the subsiding gum!

FOUNDLING HOSPITALS IN ITALY.

THE tendency of charities to become rather curses than blessings when the spirit of the founder is postponed to the letter, is amply illustrated by the foundling hospitals of Italy, an account of which is contained in a posthumous paper of Lady Amberley's. In the great hospital of the San Spirito in Rome—a spacious edifice whose high-roofed halls secure for it a ventilation and a freedom from the reputed evils of "hospitalism" unknown to more recent structures—there is an inner court which is reserved for the largest foundling hospital in the city. No objection could be made to the material aspect of the rooms. The many little cots are scrupulously clean, each with its three inmates, and each with its tidy, healthy-looking woman in attendance as wet-nurse. The infants are swaddled so tightly that no limb can move, so that they resemble wooden dolls with india-rubber necks and faces. This, Lady Amberley found, was to enable each nurse to manage three of them at once. The superintending Sisters of Mercy are as kind as they can possibly be, who have never shared the pangs and joys of a mother's heart. A young doctor is also attached to the wards to study infantile mortality on a large scale, and thus to qualify for the treatment of children's diseases in Rome itself. At a year old each surviving child is put out to nurse among the peasants in the country, and while from two to nine a day seek admission, 50 per cent. die under three months old. The system acts perniciously in enabling any mother to deposit her infant, and then to hire herself out as wet-nurse, trusting to fortune's wheel to give her her own to suckle, "though she must follow it pretty quickly if she wish to find it again among the hundreds of muling and puking atoms." At Palermo another such institution exists which has been at its mischievous work for wellnigh three centuries. The infants, however, are not swaddled as in Rome, and many more of the admissions are sent out to nurse. Last year no fewer than 1400 babies were passed through the *rota* or revolving cage! But these hospitals are pernicious not only as encouraging over-population, but (to quote the words of Lady Amberley) "as tending to weaken still further in the breast of parents that instinctive love of offspring by which nature provides for the care of the little ones." It is to be regretted that this system is strongly maintained by the Church.

THE CONTAGIOUS DISEASES ACTS.

IT is gratifying to find in the Police Commissioner's annual report a repetition of the universal opinion, that the greatly abused Contagious Diseases Acts have done much to improve the *morale* of the towns under their influence:—

"1568 women have been registered for the first time during the year, chiefly coming from unprotected districts; yet, notwithstanding this influx of 'new-comers,' the number of common women remaining on the register at the end of the year was 169 less than in the preceding year. In 5871 cases women signed the voluntary submission form; in 62 cases application for summonses were made for non-submission; but in only 33 cases was it necessary to obtain a magistrate's order to bring these women within the provisions of the Acts. In 174 cases proceedings were taken for neglecting to attend medical examination after signing the voluntary submission form or receiving a magistrate's order to attend. The dread of being brought under the operation of the Acts has, in many instances, a deterrent effect upon girls who as yet stand upon the borderland between levity and degradation, and tends to diminish the number of women on the register, notwithstanding the increase in the population of some of the places where the Acts are in force. Clandestine prostitution has been greatly reduced, no women now being able to misconduct herself, for any lengthened period, without being cautioned by the police that if she does not alter her mode of life she will have to attend medical examination. A decrease in the number of prostitutes is, therefore, due to the operation of these Acts and a corresponding reduction in the number of brothels. 179 young girls between the ages of 12 and 18, and 117 women between the ages of 18 and 30, who had been found in bad company and improper places, have been rescued."

At present only seventeen places are under the provisions of the Contagious Diseases Acts; but if they work so well at Plymouth, Portsmouth, or Winchester, why not extend them to the great cities? If Greenwich and Windsor can both be advantageously cared for in this matter, not only without scandal, but with obvious benefit, why not London and Westminster?

SIR JOHN GLOVER AND THE SICK OFFICERS FROM ASHANTEE.

WE are glad to learn that the accounts of Sir John Glover's health having been much impaired by the effects of African fever are exaggerated, and that the gallant officer may be considered quite well. There cannot be any doubt, however, that a good many of the officers who served in the Ashantee Expedition, and continued in the enjoyment of good health whilst so engaged, have since suffered much from the effects of the malarious diseases they contracted on the West Coast of Africa. It is one of the most curious and interesting facts connected with the medical history of that and other malarious districts, that the symptoms of fever, hepatitis, and other diseases of a congestive type, occasionally do not manifest themselves until long after the individuals have left the climate; and it still more commonly happens that the effects of the diseases which had manifested themselves at a malarious station continue to do so for long afterwards, and sometimes in a very different way from that which they did originally in the climate where they were contracted.

A CHARGE AGAINST A PARISH MEDICAL OFFICER.

A PAINFUL charge against Mr. Chabot, jun., of Camberwell, was brought, at an inquest on the body of Eleanor Evamy, by one Mrs. O'Donnell. It was to the effect that when Mrs. O'Donnell went with the parish order to Dr. Pinder on Sunday evening, he, being ill, sent the bearer to his colleague, Mr. Chabot, jun. Mr. Chabot said he would not go, as it was out of his district. When Mrs. O'Donnell said the woman was dying, he said, "Let her die, and there will be a coroner's inquest." After a while, however, he promised to call in two hours. But other engagements supervened, and by midnight Mrs. Evamey was dead. The jury returned a verdict of "Death from natural causes," but appended a rider regretting that Mr. Chabot had neglected to go to the deceased. Our disposition is to disbelieve this account of the facts of the case. From the mouths of two or three witnesses only should such incredible accounts be received. We are happy to be confirmed in our view by the fact that Mr. Chabot has, without delay, requested the Local Government Board to make an inquiry into the case; and till this is closed we shall give Mr. Chabot full credit for being able to give a very different account of his conduct from that conveyed by the narrative of Mrs. O'Donnell. It is much more conceivable that Mrs. O'Donnell has given some wrong representation of the facts than that a medical officer of a parish could have acted and spoken as she represents.

HYGIENE IN THE NAVY.

WE are glad to hear that, on the recommendation of the Director-General of the Naval Medical Department, the Lords of the Admiralty have ordered that in future all men-of-war carrying a medical officer shall be supplied with an apparatus by which the water supplied for the use of the ships' companies can be subjected to analysis. It is always highly desirable that the purity of the water employed on shipboard should be well ascertained, and though most of the water used on board men-of-war is distilled from sea-water, and therefore must be pure, yet there are many accidental sources of contamination in the tanks, &c., which it is well should be guarded against. Hitherto the young surgeons of the navy have been carefully taught at Netley how to make analyses of water, &c., but have never been furnished with the apparatus necessary for such investigations. Would it be possible for them to analyse the air of the lower deck when the crew are in hammocks and the ports closed?

OFFICIAL REPORTS.

AMONG the Parliamentary Papers just issued is the annual report of the Postmaster-General, which contains a singularly brief extract from the report of the medical officer to the Post-office. This extract consists wholly of some few samples of spelling exhibited by candidates for the Civil Service, and registers a hope that compulsory education will render such replies among the things of the past. Having regard to the excessive brevity of this report, and to the fact that the department employs 42,236 persons, we are forced to the conclusion that Lord John Manners has little interest in the health of the *employés* under him, or he would have given a little more space for valuable medical notes, such as can be always gleaned out of the experience of a large public establishment like the Post-office. The medical inspector of the Customs has for many years submitted a most useful and interesting annual report to the Commissioners, which report has always been published, and the same course ought to be systematically adopted at the Post-office, which now possesses three medical officers at head-quarters, besides those appointed in the various districts of the metropolis and in the provinces.

SOCIAL SCIENCE CONGRESS.

THE next meeting of the Social Science Congress takes place at Glasgow, and its sittings will extend from the 30th proximo to the 7th of October. Suitable preparations are being made for the reception and accommodation of visitors, and everything promises an interesting meeting. Among the questions which have been selected for discussion by the standing committees of departments are (in that of Public Health, presided over by Dr. Lyon Playfair)—1. What are the best methods of sewering towns and of disposing of their organic refuse? 2. In what way can healthy workingmen's dwellings be erected in lieu of those removed for the purpose of carrying out sanitary or municipal improvements for other purposes? 3. What influence has the employment of mothers in manufactures on infant mortality, and ought any and what restrictions to be placed on such employment?

KNIGHTSBRIDGE BARRACKS.

LORD E. BRUCE recently asked the First Commissioner of Works whether there was any prospect of Her Majesty's Government being shortly enabled to remove the Life Guards' Barracks from Hyde Park to some other situation; and the reply he got from Lord H. Lennox was, that "the question of the Knightsbridge Barracks was under the consideration of the Government; but even if they should disappear, his noble friend must not be too confident about the space being used for the purpose of widening the road to Kensington, as other interests would interfere which might still withhold from his noble friend the boon he now sought." Many years have elapsed since we first advocated the removal of these barracks, and we have returned to the charge again and again. Political parties in the Houses of Parliament change sides, but this old institution and annoyance to the neighbourhood still remains. We back the importunity of the public to win, however, in the long run; and we prophesy that these barracks will one day disappear from the site they occupy at present, if the members of the Government find the inhabitants bent on it.

THE DISPENSARY QUESTION AT ACCRINGTON.

A PUBLIC meeting has been held in Accrington to establish a Provident Dispensary for the benefit of the members of the different friendly societies and such of the public as are willing to comply with the rules. The disposition of the societies seems to be to follow the example of Derby and some other places, in appointing one man to do the duty on a small salary, and on the condition that he did no private practice. The mover of the first resolution, the Rev. C. Williams, pointed out the disadvantage of this arrangement, in the impossibility of securing a first-rate man on such conditions, and on the advantage of having more than one man to choose from. We have always taken a similar view. We wish the movement every success, but advise the promoters to appoint as their medical officers several of the local practitioners of standing in the town, and to pay them well. In admitting the general public to the institution, care should be taken to exclude those who are able to procure medical attendance on ordinary terms.

SUNSTROKE IN NEW YORK.

THE thermometrical range in New York during the summer is higher than it is in this country, and this, doubtless, in some measure accounts for the greater number of cases of sunstroke in that city; but there are probably other and powerful factors in operation. The American climate is more exciting, and the American temperament more excitable, than the English, and we suspect that they more frequently have recourse, at odd hours, to various kinds of alcoholic drinks than we do; any way, the residents in New York appear to be very susceptible to sunstroke. The American papers during the hot season generally contain some account or other of fatal cases of sunstroke. In a New York journal now before us, for 1st July last, we find the following, for example:—"The greatest heat of yesterday, 87°, was 15° below that of Monday. Only three cases of sunstroke were reported in this city. Of eight cases on Staten Island on Monday, one resulted fatally yesterday."

THE HOSPITALS AND THE POLICE.

IT is well known that cases brought to a public hospital by the police always receive prompt and ready attention from the authorities of those charities, but it is rather hard if the latter are to be saddled with the custody of prisoners, as the magistrate at Marlborough-street seems to wish. It makes, we take it, no difference in the status of a prisoner whether he is in custody for damage done to himself or to another. He has been taken up by the police, who are responsible for his safe custody; and if they, simply as a matter of convenience, get him admitted to a hospital for necessary treatment, they must of course be responsible for his detention. Mr. Newton expressed a "wish to know what was the use of a hospital without the means of

watching persons." We take the liberty of pointing out that watching with a view to the patient's recovery is a very different thing from watching for the purposes of custody. With the former hospital authorities are perfectly familiar, but the latter would be impossible without extra help and expense, which ought not to fall upon a charity. The best way no doubt would be for all cases of attempted suicide to be removed at once to the infirmary of the House of Detention; but as a magistrate's order would be necessary for this, it is just possible some cases of attempted suicide might end in the grim reality of death before all the necessary forms were gone through.

THE LOCAL GOVERNMENT BOARD AND THE HOLBORN GUARDIANS.

As we expected, the Local Government Board did not find it possible to pass over the conduct of the committee of the Holborn guardians which inquired into the circumstances of poor Heritage's death in St. Luke's Workhouse. Instead of acquiescing in the guardians' doctrine, that "nothing had been done but what was requisite," the Board proceed to censure nearly every workhouse official who was connected with the business, except the good day-nurse, who appears to have done her duty by reporting the serious character of the patients' illness when she went off duty. We are not particularly concerned with the distribution of blame among individuals which the Local Government Board's inquiry has resulted in. The important matter is that the Board thoroughly recognises the improper state of things at the St. Luke's Infirmary, and that the inspectors, Dr. Bridges and Mr. Longley, strongly remonstrated with the guardians for not having carried out the proper separation of the sick from the aged and infirm, and insisted on the necessity of appointing a resident medical officer, and a proper staff of paid nurses. The guardians have deferred the consideration of the matter; but we should not advise them to delay it long, or to decide it in any sense except that so properly indicated by the Local Government Board.

A GOOD EXAMPLE.

WE understand that Mr. Erichsen and Sir Henry Thompson are about to visit the United States, and to spend three months over the visit. The example is one to be followed. Our American brethren are much greater adepts at taking such holidays than we are. They enrich and vary their lives by frequent and protracted visits to Europe, taking in and taking back all that they see. If the example set by the surgeons of University College be followed we shall soon learn more of American surgery and medicine. And we know enough already to wish to know much more. Independently of the special direction of Sir Henry Thompson and Mr. Erichsen's visit, they set a good example in the intended length of their holiday. Since Sir Henry Holland died we have wanted an example of bold and complete holiday-making. We take rest in such miserable quantities. These gentlemen will come back almost younger men for the change, and with a zest for fresh exploits which may astonish and eclipse those who stop at home.

SMALL-POX AT NEWMARKET.

WE observe that several short letters have appeared during the past week in the daily journals challenging in some degree the accuracy of certain statements made by our Commissioner last week in his Report on the Outbreak of Small-pox at Newmarket. As these correspondents include the vicar of Newmarket and the chairman of the urban board of health, it is proper to inform the former gentleman that our Commissioner gleaned his facts as an eye-witness, and his statistics from the medical officer of health. Mr. Chennell, the active chairman of the sanitary committee, informs the public that £738 have been paid for vaccination by the rural sanitary authority during the past two years and a half. Will he kindly epitomise this sum, and inform our readers what proportion of it is debited to the current year?

HEALTH OF CUSTOMS OFFICERS.

THE eighteenth report of Her Majesty's Commissioners of Customs, which is just issued, contains an able and instructive chapter by Dr. Walter Dickson, R.N., on the health of the out-door officers in London and at Gravesend during the past year, consisting of a total force of 923 men. From this it appears that there were 564 cases of illness, and 10,469 days of sickness, the mean daily number of sick being in the ratio of 31 per 1000, and the death-rate, including accidents, 16 per 1000. Zymotic diseases constituted 7½ per cent. of the whole number of cases and 5½ per cent. of the time lost by sickness, but erysipelas was the only form of disease of this class unusually prevalent. Serious cases of illness appear to have been unusually numerous during the past year, for 1493 visits to patients are recorded, mostly in the north-east and south-east suburbs of London. Dr. Dickson records that the health of the Gravesend division of the force has been very satisfactory, and considers that this is a striking proof of the excellent sanitary condition of the Port of London as regards vessels engaged in the foreign trade.

AMPUTATION AT THE HIP-JOINT.

THIS operation was performed at University College Hospital on Wednesday last by Mr. Berkeley Hill on a young woman suffering from a large sarcomatous tumour connected with the upper part of the left femur, which had been growing for some months. The tumour encroached so much upon the front of the thigh and pelvis that the operator was unable to transfix the limb to form his anterior flap, and therefore dissected up the skin from the upper third of the thigh, and secured the common femoral artery before the deep structures were divided. The bone was then disarticulated by cutting through the tissues overlying the joint, and a short flap formed posteriorly. The abdominal tourniquet was applied to the aorta, and the operator was ably assisted by Mr. Heath and Mr. Beck. The patient lost but little blood, and bore the operation remarkably well.

THE ADULTERATION ACT AT MANCHESTER.

A CONSIDERABLE amount of facetiæ was recently displayed on this subject by a member of the Corporation of Manchester, from which we glean that the Act has proved in that city, up to the present time, almost a dead letter. It is not necessary to amuse our readers, as the *Pall Mall Gazette* has done, with the *quasi* witticisms of this councillor, but these and other utterances all go to prove that the Act, as at present worded and worked, is a fragmentary piece of legislation.

THE PLAGUE.

A TELEGRAM from Her Majesty's Consular Agent in Egypt, of the 3rd inst., announces the appearance of a disease resembling plague among an Arab tribe, camped at Doga, in the Asgo country, four days' journey from Mecca and one from Lit. A sanitary cordon has been drawn round the place, and a quarantine of twenty-one days' observation has been ordered by the Egyptian Board of Health on all arrivals in Egyptian ports from the Arabian Red Sea ports.

THE COMING SESSION AND THE INTRODUCTORY LECTURES.

THE following arrangements have already been made at the Metropolitan Hospitals for the 1st of October:—At St. George's, the inaugural address will be delivered by Dr. Dickinson; at King's College, by Professor Ferrier; at the London Hospital, by Dr. Fenwick; at St. Mary's, by Mr. Edmund Owen; at St. Thomas's, by Mr. MacCormac; at Westminster, by Dr. Potter; at Guy's, by Sir W. W. Gull; and at University College, by Dr. F. Roberts.

BROMPTON CONSUMPTION HOSPITAL.

THIS institution bids fair to become one of the wealthiest hospitals in the metropolis. A further portion of Miss Read's bequest, amounting to nearly £20,000, is about to be paid by order of Vice-Chancellor Malins, and during the last three months other legacies, amounting altogether to £7400, have been left to the hospital.

A CASE highly interesting to medico-psychologists and jurists alike was tried before Mr. Justice Brett on the 12th inst. A patient in Wonford House Lunatic Asylum, with suicidal tendencies, leaped from the window of a room, and while sustaining injuries which made him a cripple for life, strangely enough, recovered his reason. The first use he made of his sanity was to sue Dr. Lyle, the resident physician, for damages, on the ground that sufficient care had not been taken to prevent him (the would-be suicide) from committing the "rash act." Mr. Justice Brett ruled that the defendant had given the orders which it was his duty to give, and that no disregard of these orders had been proved. The plaintiff was therefore nonsuited.

AT the close of the Parliamentary Session Earl Fortescue moved for return of the sums expended in each year from 1861 to 1873 inclusive, by the sanitary authorities on drainage and sewerage works and on works of water supply in all towns in Lancashire containing more than 100,000 inhabitants according to the census of 1871; also, return of the number of deaths in each of such towns in each year from 1861 to 1873 inclusive under the age of 5, between the ages of 5 and 20, and above 20, distinguishing the deaths from zymotic diseases, and classifying all the deaths under the heads of gentry and professional persons and their families; tradesmen, &c., and their families; labourers, mechanics, and servants and their families.

DR. LANKESTER, in his annual report of the sanitary condition of St. James's, Westminster, has to bewail the high rate of infantile mortality which prevailed in his district during the past year, and which he attributes to overcrowding. The death-rate from zymotic diseases was exceptionally low. The need of a commodious mortuary in the parish seems to be acutely felt. We are glad to see that Dr. Lankester does all he can to impress on the authorities the necessity of providing increased bathing accommodation in Westminster. The Adulteration Act is bearing good fruit there as elsewhere.

MR. J. W. BARRY, medical officer of health for Ramsgate, in a report of the health of the town for the quarter ending June 30, states that the mortality amongst residents during the quarter was equal to 12·33 deaths per thousand annually, against 13·5 in the previous quarter. The deaths of infants under one year of age formed 25 per cent. of the total mortality. The annual death-rate from the seven principal zymodic diseases amounted to only 0·5 per thousand. There was a continued immunity from small-pox, scarlatina, typhus, and enteric fevers.

MEDICAL MEN and sanitarians in Manchester are now considerably exercised by the question of providing improved accommodation for fever patients. Mr. Leigh, the medical officer of health for the town, advocates the establishment of cottage hospitals in various parts of the more thickly populated districts, for the exclusive benefit of children. The local press is affording the inhabitants every facility for the ventilation of pet schemes and theories.

DR. TRIPE, medical officer of health and analyst for Hackney, reports that during the past year he had analysed 123 articles of food and drugs, 18 of which were of butter, 47 of milk, 12 of tea, &c. A large proportion of these were more or less adulterated. From the experiments he has made on pure butter, Dr. Tripe is of opinion that there should not be more than 12 per cent. of water in any sample. The total number of convictions obtained was 11.

No time should be lost in visiting the American Aloe at Kew, which, at the height of 22 ft., has penetrated the roof of the Succulent House. Fifty to a hundred years are required to prepare it for flowering, after which it races off at the greatest speed and dies. This particular plant has anticipated the usual order of things, its leaves having withered up before it has ceased flowering.

MR. JOHN WINZAR, medical officer of health for the City of New Sarum, Salisbury, in a recent report to the sanitary authorities, notices the singular immunity from zymotic or epidemic diseases enjoyed by the district. This freedom from sickness he attributes to an abundant supply of good water, an excellent system of drainage and sewerage, constant supervision, and the early removal of all noxious substances.

THE *Dublin University Magazine* in its gallery of scientific and literary portraits, gives for the present month an admirable photograph of Dr. William Stokes, Regius Professor of Medicine of the University of Dublin. The well-written biography which accompanies it is full of interesting matter, and records a touching anecdote of that great physician and public benefactor, the late Dr. William Pulteney Alison.

THE seventh annual congress of the Prehistoric Society of Anthropology and Archæology met at Stockholm on the 7th inst., Count Henning-Hamilton, Chancellor of the Swedish University and of the School of Medicine, in the chair. There was an exceptionally large attendance of *savans*, chiefly medical, from the principal European and Transatlantic cities.

WE regret to record the death of Mr. John Miles, for many years resident medical officer to the Charterhouse. Old Carthusians will cherish his memory as their "beloved physician" who, at Eastbourne, on the 6th inst., closed a long and honourable career with the well-known "Adsum."

IN London 1505 deaths were registered last week, including 20 from measles, 58 from scarlet fever, 4 from diphtheria, 16 from whooping-cough, 35 from different forms of fever, and 293 from diarrhœa. Different forms of violence caused 59 deaths.

WE understand that the Merchant Taylors' Company's Convalescent Home at Bognor is closed for a short time while the building is being enlarged for the purpose of adapting it to the accommodation of an increased number of inmates.

A PUBLIC meeting has been held in Dublin, under the presidency of the Lord Mayor, in reference to the drainage of the city, a question that is becoming a source of anxiety to the inhabitants.

ACCORDING to the latest returns there are now in Paris 1726 medical men, 179 *officiers de santé*, 734 apothecaries, 353 dentists, 561 midwives, and 528 herbalists.

The Times announces, by quotation, a great mortality among martins at Rome, and the writers predict, in consequence, a bad cholera season. *Nous verrons!*

A HIGH rate of infantile mortality—chiefly of children under one year of age—still prevails in Leeds.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

THE annual gathering of the British Medical Association has been held during the present week at Norwich, which in the last few years has extended its hospitalities to most of the peripatetic associations that hold their provincial meetings at this season of the year. This is the second meeting of the Association held in Norwich, the first having been held in 1846, when the annual address was delivered by the late Mr. Crosse. Some two hundred members assembled on Tuesday in this quaint old capital of East Anglia, undeterred by the long and painful journey over the Great Eastern Railway from the south, and the still more wearisome route across the country from the north. The head-quarters of the Association were at the Assembly Rooms, where the usual arrangements were made for the convenience of the members. The local secretaries were Dr. J. B. Pitt, Mr. H. S. Robinson, and Dr. Beverley. A service was held at the cathedral in the morning, which was attended by the Mayor and Corporation of the city and a considerable number of members of the Association. An appropriate sermon was preached by the Rev. Canon Heavyside. A meeting of the Council was held in the afternoon, and in the evening the members met in Noverre's Rooms to hear the annual report read, and the address of the new president, Dr. Copeman. A large number of visitors also attended, including the Mayor of Norwich, the Deputy Mayor (Sir S. Bignold), and many influential persons from the city and county.

Sir W. FERGUSSON, the retiring President, commenced the proceedings of the evening by a few valedictory words. He repeated the thanks offered to the members twelve months since for his election to the office of president, especially on so interesting an occasion as the meeting of the Association in the metropolis. He then congratulated the Association on entering upon its forty-second year, and upon meeting in the city of Norwich, which he said was not only renowned in history, but possessed great interest for all who were connected with the medical profession. It had been the cradle of much that was good and great in regard to the study and practice of medicine and surgery. The welfare of the profession was largely due to the efforts made in provincial towns, and Norwich had contributed to it most largely. He recalled the names of Cooper, Martineau, Dalrymple, and Crosse, and expressed his belief that there were those now living in Norwich who would well maintain the dignity and glory conferred upon the profession by their distinguished predecessors. He then alluded to the indications of prosperity contained in the annual report about to be read, and congratulated the members on the removal of the difficulties (pecuniary and otherwise) which had formerly beset the career of the Association, and predicted for it a great future.

The minutes of the last meeting were then read and confirmed, and, on the motion of Mr. Southam, president of the Council, seconded by Sir J. R. Cormack, a vote of thanks was passed to Sir Wm. Fergusson for the manner in which he had filled the presidential chair. Sir William, in acknowledging the compliment, said it had been his ambition from boyhood to stand well with his fellow-students and fellow-practitioners, and he had the satisfaction of feeling that he stood fairly well with his professional brethren, as shown by the position of honour which he had been called upon to occupy in connexion with the Association.

The annual address was then delivered by the new President, Dr. Copeman, and the annual report of the Council was read by the Secretary.

Mr. SIMPSON reminded the members that with increasing numbers there came increasing responsibilities, and suggested that great care should be taken in regard to grants made for scientific purposes. Some of the investigations made by the Association had not, he thought, turned out as practical as was expected, and he would put it to the members whether the results justified the infliction of pain to which many animals had been subjected.

The Rev. Dr. HAUGHTON, of Dublin, expressed himself very energetically on the same subject. He had, he said, such a love for and knowledge of animals that he shrank with horror from the responsibility of allowing a set of uncultivated, unkempt young savages to operate needlessly upon them. In this terrible question of vivisection he had always maintained that no man should submit a lower animal to an experiment which he would not be willing to have performed upon himself. The Association was entering upon a most dangerous course in giving an unlimited privilege to raw students, ignorant of their own nature and of the nature of the lower animals, to perform their experiments, which had hitherto led to no result worth recording.

Cries of "Question" greeted the remarks of Dr. Haughton, who, however, persisted in his protest, but without moving an amendment. A good deal of confusion arose when the President put the question of the adoption of the report to the meeting. Dr. Haughton insisted upon the amendment being put, and, when informed by the President that there was no amendment to submit, came to the platform and created a great deal of amusement by his strenuous efforts to obtain a further hearing. At length the motion was put and carried, and then for the first time Dr. Haughton said, "I rise to move an amendment," an announcement which was received with roars of laughter. It was with some difficulty that the meeting was brought into a sufficiently serious mood to re-elect the general secretary, Mr. Fowke; but this was ultimately accomplished, and the meeting then broke up, after giving three cheers for Dr. Haughton.

The second general meeting of the Association was held on Wednesday morning in Noverre's Rooms, under the presidency of Dr. Copeman. The first business was to consider the recommendation of the Council that Edinburgh be the next place of meeting.

Dr. CHADWICK moved the acceptance of the recommendation, and the appointment of Sir Robert Christison as the president elect.

Mr. CROSSE seconded the motion.

Dr. DUNCAN, of Edinburgh, in supporting it, promised the members a hearty welcome in the northern capital, where, he said, everything would be done to render their visit useful and agreeable. The invitation had been most cordial and unanimous, emanating from the principal officers of all the medical societies and the staffs of the infirmaries and hospitals.

The motion was then put and unanimously adopted.

Dr. RUSSELL REYNOLDS then read his Address in Medicine, which will be found in another column.

Dr. HUGHES BENNETT, in proposing a vote of thanks to Dr. Russell Reynolds, criticised his address at some length.

Dr. BATEMAN seconded the vote of thanks, which was unanimously carried.

The PRESIDENT then announced the names of the gentlemen who had been elected members of the council for the ensuing year.

The other sections met in the afternoon at the appointed places, and numerous papers were read. A large number of members met at the Surgery section to hear the opening address of Sir JAMES PAGET, which was as follows:—

I owe to being a Norfolk man the honour of being President of this Section, and certainly I owe it to that fact that when the honour was proposed to me I accepted it, for there was no other ground whatever on which I could have held such a position as this; but when on that ground it was proposed to me, I felt I was bound by a debt of gratitude to show myself,

and endeavour if I could by any means to promote the success of the meeting of the British Medical Association in my own county. I very soon found that the honour brought with it, as honours usually do, a great responsibility, which was that I should give some reason for my being here, and say something of Norfolk or of what I had to do with it. And naturally I turned back to think of what Norfolk surgery was when I left it to be a student in London; and I soon found reason for having yielded to any invitation that could come to me from my county in the feeling of profound gratitude that I had to bear to those who were my first teachers, and among whom were found my earliest and now my oldest friends. I turned to my first case-book commenced in 1830 and finished in 1834, when, just 40 years ago I left Yarmouth, where I was apprenticed, to proceed to the larger field of study in London. I had spent there four years, being apprenticed to learn the "art and mystery of a surgeon," whereupon let me say that the lawyers do us great injustice in the spelling of the word, which always implies that we have in our art some mystery or secret thing which other men should not dare to look into; whereas it is not the mystery but the *mestiery*, the *metier*, the mere business and art of the surgeon and apothecary. In my own case-book, I found nothing that in the present day would be worth recording—no more than the cases that might well be taken by any other boy from 16 to 20 at his first sight of a large practice. But I found there some things which made me still fear (falling in very much with the tone of that most admirable and wise address that we heard this morning), lest in our progress we should have let fall some of the things which had better have been held, and are now regarding some things too lightly that then seemed very grave, and perhaps are so still. For among the records which I found are records of methods of practice now almost completely disused, and yet in which I feel confident there was much right. I find, for example, a large and almost uniform practice of bleeding for all acute diseases, for many chronic, for most of those that were unknown or uncertain, and for a large proportion of cases in which there seemed to be nothing the matter. [Laughter.] Trying to learn something from these things, I came to one or two conclusions which I am sure the younger members of the profession need to have much impressed on them. One of them is that at the present day we undoubtedly over-value the blood, and estimate too cautiously the loss of it. We heard after the address to-day of the impossibility of performing vivisections upon men. It was not impossible at the time of which I speak; for then there was a practice of vivisection performed on nearly all market days on those who wished to be bled; and the early part of my life was spent in this practice. On market days patients came, and I really scarcely know for what reason, except that it was a good old custom, and the county was then Conservative. [Laughter.] They had some discomfort, and wished to be bled, and I bled them usually till they fainted, and the charge for bleeding was one shilling. Now, looking at that, as I can with a very clear memory of its results, and with a more scientific tone of mind than I then possessed, I can regard those as a series of vivisections fairly performed for the determination of what is the influence of the removal of blood up to the point of syncope upon a comparatively healthy person. I think I can say surely that not one of these persons suffered harm. I kept my cases with much care, and I have a clearer recollection of that period of my professional life than I have of an equal period of any part of it which has since passed, and I verily believe that not one person suffered harm. There were a few who came afterwards with trivial inflammation about the wound, a few with light attacks of what might be called adhesive phlebitis; clots formed in the wound, and obstructed the vein for a time, but beyond that no damage, to the best of my belief, ever was sustained. Amongst these were a large number of pregnant women, for in the eastern part of the county at that time it was the general belief that pregnancy might not pass through its whole course without some mischief unless a patient were bled; and in these cases, too, no harm whatever came. The custom seems like a comedy, but there are in it, and in the records of it, a series of facts of very great importance. They prove to my mind as clearly as anything of the kind can be proved, that the loss of blood up to fainting, and in some cases I remember with those epileptiform convulsions that come with the loss of blood, is absolutely harmless. I will venture to say that there are few persons in this room who might not be bled to fainting, and to-morrow be almost unconscious of it, and perhaps in this week of hospitalities might even be the better. That fact, I take it, may be held by the practice of former times as perfectly assured; and we therefore probably take vastly more care than we need of the saving of blood in healthy persons. I am far from suggesting that any good followed this method of proceeding. I speak of it literally, as if it had been simply a course of vivisections to determine the influence of the loss of blood to the point of fainting upon a large series of healthy persons. Among the cases recorded I also find that all who suffered from acute symptoms, especially from acute pain, with the ordinary signs of fever, were largely bled. That was a custom scarcely without fail. As soon as the hot skin, and a rapid pulse, and a flushed countenance, were found with local pain or any other acute symptoms—as delirium for example—at once bleeding was resorted to. I will not venture to say how much of real good was done by these cases, but this I will say, that I believe there is at present no remedy employed from which the immediate relief derived is so great or so complete as it was from bleeding. From time to time I have the record, and many more times I have the clear memory, that after every bleeding there was a distinct expression of the very greatest relief, and commonly following that a firm belief that the bleeding had cured the disease. And this I remember—and I tell it as a guard against any suggestion that I should at once propose the same manner of treatment—that this relief of suffering followed in those who quite certainly were suffering from profound anæmia. Persons who were bloodless, pale, and faint, who yet complained of the continuance of the local symptom, were again and again bled, and again and again experienced temporary relief. Call it again vivisection, if you will; at least the fact is worth recording, that for nearly all the most pressing symptoms of acute disease, bleeding was at the time an almost complete remedy. It would be impossible from those records, or from any others much better than mine of the same time, to determine now by any method of analysis what cases gained real, and what gained only passing or apparent relief; but I cannot for a moment believe that there were none among those cases that were not thoroughly and fully relieved by the proceeding. For what have we to believe, if we suppose they were not? Why, that all those whose names we hold in honour as the most sagacious teachers of that time, the men whose acumen we praise, whom we speak of as the keenest observers of their time, were at this point profoundly and guiltily mistaken. Can we suppose that those who were teachers then—to mention only those who were the great leaders of practice in this city at the time—men like Crosse and Dalrymple, and Wright, and Lubbock, and the rest, were keen in all their observations of the diagnosis of disease, could forecaste what would be its course, and judge exactly of its effects, and yet, in respect of that to which they gave the best portions of their lives and minds, the treatment of it, were even stupidly in the wrong, and doing grievous damage to those to whom they were seeking to do good. I will take any hypothesis of pathology rather than believe that. That there were cases greatly benefited I have no doubt, and one of the chief inquiries we have to enter upon even now is, which of the cases suffered harm, and which were really benefited by the treatment which we now neglect. In another line was the almost constant use of mercury. For nearly all the chronic affections, for nearly all cases that were obscure, mercury was given to the point of producing some degree of salivation; and amongst all the prescriptions that I dispensed most frequently I suppose there was none nearly so frequent as a quarter of a grain of calomel and a quarter of a grain of opium every four hours. For that there was a traditional respect which had been derived from a physician, I suppose, of very great sagacity, who had practised in Yarmouth some time previously—Dr. Girdleston. From all that is recorded of him, he must have been a very exact observer. He had seen much practice in Italy; and although he was a man of remarkable presence—faith-giving in his mere appearance, I cannot but believe that he did great good among the sick, and he had handed down this prescription, which prevailed from that time many years onward, and throughout the whole of my apprenticeship, for all obscurities, for all those things for which I will venture to say, with not at all fewer mistakes, some now give bromide of potassium, and some what is called a light tonic. I have no doubt, even from my own cases, that sometimes their practice was mischievous; but I am equally sure that it was in many cases very beneficial. The cases in which it did good I cannot now recognise, but let me observe that it probably did good in a large number of the cases of which the real nature was at the time not discerned, and in a large proportion of the chronic diseases of internal organs which we now assign to syphilis. At the time there was no suspicion that syphilis affected any but the external parts;

we know now a multitude of syphilitic affections of the liver, of the lung, of the spleen, and many more still of the nervous system, with syphilitic affections of the brain, which were at the time put down vaguely to chronic inflammation of unknown origin, or to tumours, thickenings and productions of substances that needed to be absorbed; therefore mercury was given, and therefore mercury cured a considerable proportion of cases for which it was given, and therefore, as in the present time, having this power of curing a certain per centage, we assume that it will cure all diseases that look like those that are cured by it. This leads me to suggest (and I know not where I can suggest it better than to a meeting such as this, which will soon spread itself over the land and be actively studying everywhere), that whereas we are at the present time rather apt to think that pathology should be the guide of therapeutics, there is a large number of cases in which therapeutics should rather be the guide of pathology. The fact that a medicine cures a given disease is as much a fact, and quite as significant a one, as is the employment of a chemical test for discerning the nature of a solution. It can be repeated from time to time, and with the same results. There is hardly anything in the chemistry of complex bodies more sure than that quinine cures ague, and spreading from that, that it cures a large number of periodic diseases. And as with quinine so with mercury. If at that time the value of therapeutic tests for indicating disease had been fairly estimated, we should have come by many years sooner than we did to a knowledge of the syphilitic nature of a large number of internal chronic diseases. If it had been fairly said, "We have no clear knowledge of mercury as a remedy other than this that it cures syphilis, and therefore that what it cures is likely to be syphilitic," we should have come at once to the knowledge of that which it took twenty years more to ascertain. We are, I believe, too much under the guidance of what may be justly called inferential therapeutics; because we know something of pathology we may therefore proceed at once from pathology to the recollections of the remedies of disease. It is a fair method of study if it be not carried to excess, but it should be studied side by side with the other fact that therapeutics may just as fairly be a guide to pathologic knowledge. But after all, my knowledge of Norfolk and Norwich surgery are more with persons than they are with things, and I am bound by all recollections of gratitude to record some of them here. One whose name was perhaps never known beyond his own town, where perhaps now it has been forgotten, was my first and good master, Mr. Charles Costerton, a man of admirable sagacity in his profession, a good anatomist, a good practitioner, and, above all, one who set a good example of continual study, and helped me in all the work I was disposed, and some of that which I was indisposed, to undertake. Then, as guiding him, those that were the chief guides of the practice of surgery in Norwich, and amongst them all the leader, Mr. Crosse, of whom it is very hard to speak in measured language, for if I were to speak of one who, better than all I knew at that time, and equal to any I have known since, had the qualities both for being and producing good surgeons, it was he. A profound student of his profession in all its branches, a seeker of knowledge wherever it might be found, in any language within his reach, a recorder of his facts to the last degree of minuteness, and one so in earnest that he spread about him a contagion of earnestness which it was indeed most hard to resist; and in a yet more personal sense the producer of great surgeons in that one of my own pupils, the vice-president, is his son and most worthy follower. [Applause.] With him as a colleague was one very unlike him, but who might teach other qualities not less valuable in surgery—Mr. Dalrymple. Our president, who, as you perhaps know, has been the author of admirable memoirs of his contemporaries and predecessors in the Norwich Hospital, has recorded of him that which we should be all so anxious to imitate, the almost distressing sense of responsibility which he continually felt; the way in which he had almost to be driven to that which he knew to be right, lest by some accident or oversight he should do that which was wrong: the constant dwelling upon all suspicions that he had not fulfilled his whole professional duty—a tone of mind not wise perhaps to be the master process but yet most wise to keep, lest others should take the lead. And with him there was another, the very type of that which a general practitioner should be—Mr. Johnson, who was at that time assistant-surgeon to the hospital—busy, active, and conscientious, and learning, as our admirable orator of to-day said it was most necessary to learn, the inner life of every family to which he went, the inner feelings of every patient he had under his care, till he passed, in nearly every house, from being not the mere surgeon or physician, but the wise, judicious counsellor, the other parent of the young, the intimate friend of all with whom he mingled. I remember others; for no man is in himself, I suppose, fit to be the whole and single study of any others, and our wisdom is rather to study that which is best in each, and make from all together the ideal which we would most imitate. There were men here with that happy audacity in surgery which enters sometimes as an element very necessary for the active life we have to lead. Of Dr. Lubbock, as a physician, I had no power of judging; but as a surgeon, which he was, I believe, much more than a physician, he was profoundly wise in his audacity, taking a lead where others might be wiser than himself, but often doing that which others dared not do, and doing it successfully. There was another, too, from whom that at least might be learned, and of whom I must speak in that view with respect—William Webber, of Yarmouth—a man not wise or right in some other things, but in that giving an example from which all might study. These are some of my best memories of Norwich and of Norwich surgeons, and they have been maintained in succeeding generations by my finding amongst my oldest friends those who have held the lead in surgery since, and, in a generation yet nearer than theirs, amongst my own pupils, those who still hold it. So that visitors of the British Medical Association when they come here, come to no common place for the discussion of surgery. Here it has been studied very gravely and very earnestly; here let it be so discussed, and not in a professional spirit only, but in a really scientific one. I owe to Norfolk, and chiefly to Norwich, much of that which led me in early life to go somewhat beyond the ordinary bounds of study into the range of science. It should never be forgotten that in Norwich was trained Sir James Edward Smith, the founder of the Linnæan Society, the leader of botanical knowledge of his time. And him followed Sir William Hooker, best of all botanists of his time, the founder and out-worker of the greatest botanical institution in the world at Kew Gardens, whom it has been the great happiness of my life to have had in intimate friendship from my earliest years; who does Norwich the honour, let me say, of sending his own son to study surgery here. Then let me name Mr. Dawson Turner, a botanist, an artist, an antiquarian, one with whom anyone might study and be helped to study all that might help him both to the tone and temper and to true knowledge of his profession. From all these it would be wrong if anyone had gone without, I will not say succeeding in his profession, but without a thorough knowledge of the manner in which he might gain success, and an honest ambition for the success that they achieved. And if I put them all in my memory together, I should say that from them I learned that principle which I had tried, however vainly, to follow out in all my study, the principle upon which it will be well if we begin our present surgical meeting, that he that will seek the truth earnestly with patience and humility, in the fear of God, and the love of man, will surely find it. [Loud applause.]

The various papers allotted to the Section were then read.

In the evening a *soirée* was given at St. Andrews Hall, which was very numerously attended.

In the Public Medicine section, over which Mr. W. H. Michael presided, Dr. Rogers, ex-president of the Poor-law Medical Officers' Association, made a statement that where medical relief was stinted the general expenditure on Poor-law relief was heavy. Mr. Gathorne Hardy estimated the proportion of pauperism which was attributable to sickness at 50 per cent., while Dr. Wallace estimated it at 72 per cent. Taking an average of the two estimates, the result indicated was 65 per cent., and the salaries of Poor-law medical officers were so arranged that it was impossible that they could do their duty.

Mr. C. S. READ, M.P., Secretary of the Local Government Board, said he believed that in public health, as in a great many other matters connected with public businesses, moderation would work more than harsh measures. People would not be made healthy by Act of Parliament any more than they could be made sober and moral by Act of Parliament, and it was the duty of all in their private stations to impress upon those around them the fact that sanitary reform must commence at home.

Dr. RUMSEY, of Cheltenham, read a paper on the Correlation of Sick Poor Relief and Public Health Administration.

Dr. BEVERLEY read a lengthened paper on Hospital

Hygiene, illustrated by reference to the Norfolk and Norwich Hospital.

[BY TELEGRAPH.]

The third general meeting was held on Thursday at Noverre's Rooms.

A report was read from the Medical Reform Committee. It stated the general purport of the Bill of the Association, and the reasons which led the committee not to press it forward during the past session of Parliament. The committee looked with much favour on the efforts of the Medical Council in promoting a scheme of conjoint examinations, and recommended that the influence of the Association should be brought to bear on the Government, with a view to legislation. The report was adopted. Committee re-appointed.

Reports were also read from the Registration of Disease Committee and the Parliamentary Bills Committee. These were adopted, and the several committees re-appointed, as were also the members of the Joint Committee on State Medicine, from whom no report was received, it being stated that there had been no opportunity for active interference during the past year.

A draft report was then submitted from the State Medicine Qualification Committee, recommending the establishment of a uniform qualification in State Medicine for all public medical officers, to be registered as an additional qualification. The address in Surgery was delivered by Mr. Cadge, which will be found *in extenso* in our present number.

A report was then read by Dr. Hughes Bennett on the Antagonism of Medicines, in which he gave an account of a large number of experiments on the lower animals. It was explained that in numerous cases the effects of fatal doses of certain substances were either entirely removed or greatly modified by the administering of other and antagonistic substances, and it was believed that similar results of the neutralising poisons might be produced in the human subject. It was also urged that the Association ought to continue its grants in aid of these experiments.

A special meeting was then held, at which it was proposed to incorporate the Association under the Act of 1867. Mr. Upton, the solicitor, explained the advantage of incorporation in the way proposed rather than by Royal Charter. After a brief discussion the proposal was unanimously accepted.

The various sections met in the afternoon, and a public dinner was given in the evening at St. Andrews Hall.

THE BRITISH PHARMACEUTICAL CONFERENCE.

THE British Pharmaceutical Conference which has just held in London its eleventh annual meeting, owes its existence to the spirited exertions of a few distinguished pharmacists and chemists. It was first organised at Newcastle, in 1862, and held its first meeting at Bath in the following year. From that time to the present it has increased steadily in strength and importance, and has in every way contributed remarkably to the extension and development of scientific pharmacy in Great Britain. The number of members has increased from about one hundred and fifty to between two and three thousand; the papers read at its meetings and printed in its "Transactions" have been uniformly good and practical, and a most excellent "Year-book," which is truly an epitome of all the chief discoveries bearing on pharmacy, has, for the last four years, been presented to each of its members.

Until the present year, the Conference has always been held in the town where the British Association was assembled, so as to enable the members to kill the two birds with one stone, but this year it was found necessary to depart from this course. Serious differences, as yet unreconciled, have arisen between the Irish apothecaries and the chemists and druggists of Ireland, and for the present the former decline to meet the latter or to recognise them in any way. The meeting has therefore been held in London, with what success remains to be recorded.

The Conference opened on Wednesday, August 5, in the rooms of the Pharmaceutical Society, which had been lent for the purpose. In the evening the members attended a *conversazione* to which they were invited by the officers of the Pharmaceutical Society. A large collection of objects of interest was exhibited, and everything was carefully studied by the visitors, who mustered in great force. The collection was far too extensive to permit of any detailed description, but it is impossible to avoid reference to some of the articles more especially interesting to medical men.

Taking the pharmaceutical preparations first, we must notice the beautiful specimens of opium and its alkaloids, of aconitine, and of thymic acid, or thymol, sent by Messrs. Morson. Messrs. Davy, Yates, and Routledge, exhibited iodoform, potassæ boro-tart., quiniæ valerian., and other interesting specimens. Messrs. T. and H. Smith showed the new alkaloid cryptopia, and a fine specimen of cantharidine. Messrs. Hopkin and Williams sent some beautiful specimens of the less common chemicals, of which some magnificent crystals of sulpho-carbolate of zinc, methyl-strychnine and its salts, and the hydrochlorate of trimethylamine, may serve as examples. Messrs. Southall, Son, and Dymond had a valuable and interesting collection of drugs, and a student's chest containing specimens of the materia medica of the British Pharmacopœia, well adapted for practical study. Coated pills and glycerols, or medicated lozenges, from Messrs. Kirby and Co.; similar articles from Messrs. J. Richardson and Co., of Leicester. Messrs. Bullock and Co., of Philadelphia, Mr. Hampson, and others, represented the luxuries of medicine, and illustrated the extent to which the natural "nastiness" of medicine can be overcome. Endless medical appliances were of course exhibited, but our space compels us to pass them unnoticed. Messrs. Barnett and Foster, and Mr. Hogg, sent effervescing drinks, the latter more than a dozen varieties, of which the bromo-citrate of lithia water was of course prominent. Messrs. Zimmermann, in addition to a collection of chemical and physical apparatus (also exhibited by Messrs. Griffin and Sons, and Mr. Jackson), showed Beindorff's steam apparatus for pharmaceutical laboratories, which strikes us as the best thing of the kind we have seen.

Great interest was expressed in a collection of products, derived from the now celebrated *Eucalyptus globulus*, lent by Professor Bentley. The tree itself, fine young plants six or eight feet high, its wood, bark, and essential oil, paper made from it, cigars and cigarettes, lozenges, pills, syrup, wine, balsam, and even soap, all impregnated with the oil, were placed together, and showed the many uses to which the plant may be applied.

We can only allude to Dr. Gladstone's curious photograph of fluorescent substances, to Mr. Whitehouse's electrical recorder for omnibuses, and to the electrical apparatus lent by the Indiarubber, Gutta-percha, and Telegraph Works Company, and must leave many other interesting articles unnoticed.

On Thursday the real work of the Conference was opened by an able address from the president, Mr. T. B. Groves, of Weymouth. He dwelt in great detail upon the past, present, and future of British pharmacy. He urged the want of a chartered and endowed College of Pharmacy, similar to that in Paris, which now boasts of 500 students, and pointed out the great importance of tempting a better class of young men into the trade by exonerating them from servile work, and by affording them opportunities for self-improvement. He then attacked the subject of adulteration, and although his views differ widely in many respects from our own, they were well and clearly stated, and are valuable as an unusually able argument from the tradesman's stand-point. The present is, however, not the occasion on which to discuss them.

Of the papers which followed, and which occupied a great part of Thursday and Friday, it is only possible here

to say that they were quite up to the usual standard of excellence, and that the discussions which followed them elicited a great deal of useful truth. A few of the papers were of course trivial, but most of them were obviously the outcome of careful and skilful work.

On Thursday evening the members dined together at the Cannon-street Hotel. The dinner was quite a success, and the usual toasts, speeches, and songs accompanied it, but there was nothing that calls for special notice. Far more remarkable, because more novel, was the excursion on Saturday, which terminated the Conference. At 10.45 in the morning, a party of about 130, including many ladies, started in a special train from Paddington Station for Great Marlow, the country members being the guests of their London friends. The arrangements of the railway company were somehow imperfect, and the party did not arrive at their destination till about one o'clock. A sort of picnic luncheon awaited them in a cornfield near the station. This was despatched with great promptitude, and the river-side reached in less than half an hour. Two resplendent pleasure-barges were here in readiness, with a band on board each, and each was soon crowded with the *élite* of pharmacy. The tow-ropes were adjusted, and "the stately ships moved on" at a pace that discomposed neither the swans nor the fishes. The skipper oscillated between truculence and extreme urbanity as the passengers would not or would trim the boat. All the bottled beer disappeared in the first half-mile, with the assistance of only two tumblers. More was discovered, and "the prescription as before" was tried with marked success. All who know the river between Great Marlow and Maidenhead know how lovely the country is, and it was pleasant to see how thoroughly it was enjoyed by the visitors from the less lovely seats of chemical industry. At Cookham the barges were moored, and the party spent an hour in wandering through the woods of Cliefden, the Duke of Westminster having good-naturedly thrown his grounds open for the day. There is hardly a more beautiful spot in England, and the party were in such excellent temper that even a slight shower of rain was voted rather an advantage than otherwise, the cool air and the wonderful cloud effects being considered well worth five minutes under the branches of an oak. At Maidenhead a *dejeuner*, that is, an excellent cold dinner, was ready in a large marquee on the hotel lawn. Then came some speeches, few and, it is fair to add, good, an impromptu dance on the lawn, suggested by the genius of the honorary secretaries and carried into vigorous execution by the President of the Pharmaceutical Society himself, and an adjournment to Taplow Station, whence, in about an hour, the whole party arrived safely in London. The whole expedition was well designed and carried out, and reflects great credit on Prof. Attfield and Mr. Carteighe, to whose exertions the day's success must be ascribed.

Medical News.

ARMY MEDICAL SERVICE. — The following is a list of candidates who were successful at both the recent London and Netley examinations, having passed through a course of instruction at the Army Medical School, Netley:—

	Marks.		Marks.
Ward, L. B.	4841	Smith, J. A.	3435
Gallwey, T. J.... ...	4616	Martin, J.	3116
Miller, W. B.	4250	Young, P. S.	3105 }
Hickson, G. R. ...	4205	Greene, J. J.	3105 }
Jagoe, E. R.	4085	M'Creery, N.	3062
Prendergast, J. ...	4072	Gormley, J. A. ...	3039
Pratt, W. S.	3780	Foss, J. E. W. ...	2915
Smyth, C. C. H. ...	3568	Turner, C. P.	2887

INDIAN MEDICAL SERVICE.—The following is a list of candidates who were successful at both the recent London and Netley examinations, having passed through a course of instruction at the Army Medical School, Netley:—

	Marks.		Marks.
Leckler, H. M. ...	5868	Malcolm Smith, G. J.	4465
Corbett, J. L.... ...	5628	Lancaster, J.	4450
Browne, S. H.... ...	5345	Yeld, H. P.	4300
Mair, E.	5330	Fullerton, J. C. ...	4075
Benson, S. H.... ...	5308	Warden, C. J. H. ...	4065
Armstrong, J. ...	5125	King, W. J.	4003
Warder, R.	4825	Patterson, D. A. ...	3880
Dawson, L. R. ...	4798	Wilkins, J. S.... ...	3808
Shircore, J. C. ...	4650	Barren, W. A.... ...	3802

UNIVERSITY OF LONDON.—The following is a list of candidates who have passed the First M.B. Examination:—

FIRST DIVISION. — Samuel Herbert Burton, University College; Robert Edmund Carrington, Guy's Hospital; Charles Robert Bell Keetley, St. Bartholomew's Hospital; Nestor Isidore Chas. Tirard, King's College.

SECOND DIVISION.—Henry Blake, St. George's Hospital; Thomas Colcott Fox, Charles Walter Godfrey, Joseph Wm. Hunt, Thomas Mark Pinnell, Herbert Richard Octavius Sankey, and John Foster Trafford, University College; Percy Herbert Edmund Freund and Geo. Frederick Rossiter, St. Thomas's Hospital; George Michael James Giles, St. Mary's Hospital; Charles Edward Gosling, Queen's College, Birmingham, and St. Bartholomew's Hospital; John Samuel Joule, Anderson's University and St. Bartholomew's Hospital; Walter Aubrey Kidd and Charters James Symonds, Guy's Hospital; Edward Arthur Snell, King's College

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.—Henry Laurence Champneys, Guy's Hospital.

SECOND DIVISION. — Albert De Winter Baker and Alfred Finch, Guy's Hospital; Samuel Ferguson Bigger, Liverpool School of Medicine; Francis Richardson Cross, King's College; Charles Henry Cuming, William James Pickup, and James Ryley, University College.

PHYSIOLOGY ONLY.

FIRST DIVISION.—Benjamin Arthur Whitelegge, University College.

SECOND DIVISION.—Richard Legg Batterbury and Edw. Marriott Cooke, King's College; Herbert Duke and John Christian Ferrier, Guy's Hospital; Charles Walter Evans, John Geoffrey Langley, and Wm. Whitchurch Taunton (B.Sc.), University College; Charles Edward Harrison and Arthur Jermyn Landon, St. Bartholomew's Hospital.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Aug. 6th:—

Brady, Owen Cornelius, Vernon-road, Birmingham.
Mitchell, Charles Joseph Carter, Kempston, Bedford.

The following gentlemen passed their Primary Professional Examination on the same day:—

Lewis Berkeley Calcott, Robt. Haselden, Walter Relf Pearless, and Alfred Upton, St. Bartholomew's Hospital; Sidney Geo. Parkinson, St. Mary's Hospital.

COLLEGE OF PHYSICIANS, IRELAND.—At examinations held on Aug. 4th, 5th, and 6th, the following gentlemen obtained the licences in Medicine and Midwifery:—

MEDICINE. — Arthur Henry Cole Dane, Edward Michael Angelo Hogan, Agmon Blathwayt Vesey.

MIDWIFERY.—Samuel Thomas Gordon, Agmon Blathwayt Vesey.

THE library of the Royal Medical and Chirurgical Society was closed on Monday, August 10th, and will be re-opened on Thursday, September 10th.

TESTIMONIAL.—On the 6th inst. a testimonial, consisting of a most beautiful and costly silver tea-service (in case), together with a magnificent silver salver in a handsome morocco case, was presented to Mr. W. A. Patchett, late senior resident medical officer of the Manchester Workhouse Hospital, by the officers of the institution and other friends, as a token of their regard and esteem on his resigning his appointment. The presentation was made by Dr. Hardie, the visiting medical officer. Several other gifts from the sick inmates, as a token of their gratitude and affection, were presented to Mr. Patchett.

Medical Appointments.

ARTHUR, Mr. M'G. F., has been appointed Surgeon to the Leeds Public Dispensary.

ATKINSON, F. E., M.R.C.S.E., has been appointed an Assistant Resident Medical Officer to the General Infirmary, Leeds, vice Hunt, resigned.

BEAVAN, J., F.R.C.S.E., has been appointed an Acting Medical Officer to the Brighton and Hove Provident Dispensary.

BOWER, Mr. E. D., has been appointed an Assistant Resident Medical Officer to the General Infirmary, Leeds, vice Granger, resigned.

CASS, E. E., M.R.C.S.E., has been appointed Medical Officer for the Swinefleet District of the Goole Union, Yorkshire, vice Wagstaff, resigned.

COOK, J. W., M.D., M.R.C.S.E., has been appointed Medical Officer for the Great Bromley District of the Tendring Union, vice Meadowcroft, resigned.

CORMACK, J. C., L.K.Q.C.P.I., L.R.C.S.I., has been appointed House-Surgeon to the North Dispensary, Liverpool, vice Donovan, resigned.

CROOK, J. E., M.D., L.R.C.P.L., has been appointed Medical Officer of Health for the Northfleet Urban Sanitary District.

CROWFOOT, E. B., M.B., has been appointed a Medical Officer to the Beccles Hospital.

CROWFOOT, W. M., M.B., has been appointed a Medical Officer to the Beccles Hospital.

FAULKNER, W. I., M.D., C.M., has been appointed House-Physician for six months to the North Staffordshire Infirmary, Hartshill, Stoke-on-Trent, vice West, resigned.

FLEMING, W., M.D., has been appointed Medical Officer for the Marsden District of the Burnley Union, vice Heyworth, resigned.

GIBBONS, Mr. C. T., has been appointed Assistant House-Surgeon at the West Sussex, East Hants, and Chichester General Infirmary, vice Milward, resigned.

HOLMES, C., F.R.C.S.E., has been appointed Medical Officer of Health for the Slough Urban Sanitary District: £25 per annum; acreage 350; population 4500.

HORNER, A. C., M.R.C.S.E., has been appointed House-Surgeon to the Kidderminster Infirmary, vice Lyddon, resigned.

JACKSON, J., L.R.C.P.Ed., has been appointed Medical Officer and Public Vaccinator for the Frodingham District of the Driffield Union, vice Walker, deceased.

KEELING, J. H., M.D., F.R.C.S.E., has been reappointed for the ensuing seven years an Hon. Surgeon to the Sheffield Public Hospital and Dispensary.

MAGRATH, J., M.D., has been appointed an Assistant-Physician to the Metropolitan Free Hospital, vice Hall, resigned.

MEDCALF, E. S., M.R.C.S.E., L.R.C.P.Ed., L.S.A.L., has been appointed Resident Medical Officer to the Western Branch of the Brighton and Hove Dispensary, vice Morris, resigned.

METCALFE, R. I., M.D., has been appointed a Medical Officer to the Beccles Hospital.

MILLSON, G., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Superintendent of the Metropolitan Asylum District Asylum for Imbeciles, Hampstead.

NEEDHAM, F., M.D., M.R.C.P.Ed., has been appointed Medical Superintendent of the Barnwood House Lunatic Asylum, Gloucester, vice Wood, resigned.

PALEY, W. E., L.R.C.P.L., M.R.C.S.E., has been appointed Registrar and Chloroformist to the Evelina Hospital, Southward-bridge-road.

PATTEN, C. A., M.R.C.S.E., has been appointed Medical Officer of Health for the Ealing Urban Sanitary District: £75 per annum; acreage 3000; population 10,000.

PRICHARD, A. W., M.R.C.S.E., has been appointed House-Surgeon to the Royal Westminster Ophthalmic Hospital.

SMITH, J., M.D., has been appointed Physician to the Dumfries and Galloway Royal Infirmary, vice P. Murray, M.D., resigned.

SPOONER, C. H., M.R.C.S.E., has been appointed an Acting Medical Officer to the Brighton and Hove Provident Dispensary.

SPRATLY, S., M.D., has been elected Surgeon to the Birkenhead Borough Hospital, vice Wilson, resigned.

THOMPSON, E. T., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Whitmore District of the Newcastle-under-Lyme Union, vice Ormsby, resigned.

WATSON, M., M.D., F.R.C.P.Ed., has been appointed Professor of Anatomy at Owens College, Manchester.

WHITTLE, E. G., L.R.C.P., M.R.C.S., has been appointed House-Surgeon to the Brighton and Hove Lying-in Institution, and Hospital and Dispensary.

Births, Marriages, and Deaths.

BIRTHS.

BRAND.—On the 7th inst., at South Hackney, the wife of Samuel E. Brand, M.R.C.S.E., of Cornhill, of a daughter.

CREW.—On the 28th ult., at Higham Ferrers, the wife of J. Crew, L.R.C.P.L., of a son.

DOUGLAS.—On the 3rd inst., at Newbury, the wife of W. T. P. Douglas, M.B., of a son.

HARRIS.—On the 4th inst., at Marazion, the wife of A. Harris, M.D., of a son.

MACLACHLAN.—On the 6th inst., at Doonbank, Patna, Ayrshire, the wife of Wm. Maclachlan, M.D., of a daughter.

WEDDERBURN.—On the 4th inst., at Forfar, the wife of A. Maclagan Wedderburn, M.D., of a son.

MARRIAGES.

LAWTON—LYMM.—On the 5th inst., at the Wesleyan Chapel, Oxford, Joseph Lawton, L.R.C.P., Surgeon, of Torquay, to Hannah Elizabeth, only daughter of J. R. Lymm, Esq., of Oxford.—No Cards.

RANKING—DUNCAN.—On the 29th ult., at St. John's, Tunbridge Wells, John E. Ranking, B.A., M.R.C.S. (seventh son of the late Robert Ranking, Esq., of Hastings), to Elizabeth, eldest daughter of Robert Duncan, M.D., F.R.C.S, of Hanover House, Tunbridge Wells.

WRIGHT—PASSAVANT.—On the 5th inst., at Mill-hill Chapel, Leeds, Charles James Wright, Esq., of Park-square, to Emily, eldest daughter of P. W. Passavant, Esq., of De la Haye House, Leeds.

DEATHS.

DURHAM.—On the 4th inst., Andrew Durham, M.D., of Belmont-avenue, Sandford, Co. Dublin, Deputy Inspector-General of Hospitals, Bombay Medical Service, retired, aged 61.

FAIRBANK.—On the 30th ult., at Lynton, North Devon, Sarah Ellen, the beloved wife of F. Royston Fairbank, M.D., M.R.C.P.

FERGUSON.—On the 6th inst., Joseph Ferguson, M.D., of Prospect, Mullingar, Co. Westmeath, aged 73.

GIBBS.—On the 31st ult., J. H. Gibbs, M.D., of Topsham, Exeter, aged 63.

HAYMAN.—On the 2nd inst., at Brooke House, West Malling, C. C. Hayman, M.D., of Eastbourne, aged 48.

HOLLAND.—On the 6th inst., John J. Holland, M.D., of Galway, Surgeon Peninsular and Oriental Steam Navigation Co.'s Service.

MILES.—On the 6th inst., John Miles, M. & L.S.A.L., of Eastbourne, late Resident Medical Officer to the Charterhouse, aged 82.

SMILES.—On the 9th inst., Edward Smiles, M.R.C.S.E., of Alnwick, Northumberland.

[N.B.—*A fee of 2s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. Phillips: **Materia Medica and Therapeutics.**
Mr. Francis: **The Indian Medical Officers' Vade-Mecum.**
Dr. Lincoln: **On Electro-Therapeutics.**
Messrs. Angell and Hebner: **Butter, its Analysis and Adulterations.**
Nouveau Dictionnaire de Médecine et de Chirurgie.
Mr. Herring and the Telegraphs.

Notes, Short Comments, and Answers to Correspondents.

A FRENCH CENTENARIAN.

WHILE it is more than doubtful whether the age of 105 has ever been reached, cases are not uncommon in which 100 or even a few months beyond have been attained. Mr. Hotham, H.B.M. Consul at Calais, has just completed his investigations into a case in point, and embodied the result in a report just published. A lady died at St. Pierre-les-Calais in 1870, aged 100 years and 19 months. Mr. Hotham has in his possession a certificate from the Town Hall of Tournai, in Belgium, of this person's birth, entered in the register as having taken place at Tournai on the 6th of June, 1768, and giving her own full Christian names as well as her father's and mother's. He has a certificate of her death at St. Pierre-les-Calais on the 17th of March, 1870, also with her full Christian names and those of her father and mother. All civil registers having for very many years been kept in France and Belgium with scrupulous regularity, there is, says Mr. Hotham, no way of getting over the fact of this woman having died in her 102nd year, except by doubting her identity. Her identity, however, happens to be singularly easy of proof. It is matter of history that this lady—already a mother,—together with her husband, was awaiting her doom by the guillotine in prison in Paris in 1794, and probably escaped death only by the fall of Robespierre. Mr. Hotham himself conversed with her when in her 99th year, and found her working without spectacles. Though rather deaf, she seemed in very good health and spirits, and trotted with him about the garden for nearly half an hour, chatting freely, though avoiding all allusion to the agitated times of her youth, about which she had latterly become rather confused. The case seems authentic enough to merit the attention of Mr. Thomas.

Mr. Samuel Nichols, (St. Ives.)—We regret that we cannot do more than suggest that the patient should consult some medical man.

Mr. D. M. Ross.—The book may be read with advantage.

VERSION *versus* CRANIOTOMY.

To the Editor of THE LANCET.

SIR,—The following case is marked with interest, inasmuch as it proves that there is one step which can be taken between forceps and craniotomy—a step which was strongly advocated by the late Dr. J. J. Phillips.

R. T—— had been twice previously delivered by craniotomy. For notes of these operations I am indebted to the kindness of Dr. F. J. Brown, of Rochester; being taken at the time, they are consequently very short, but demonstrate clearly the steps of the operations.

"Feb. 10th, 1871.—Mrs. T——, aged twenty-four, of Chatham; attended by midwife; in labour twenty-three hours; present, Messrs. Walter Buchanan, Steddy, Ely, Bell, and Dr. F. J. Brown. It was the first child, and a cranial presentation. Delivered of a dead female child by craniotomy. The crotchet was used by all the surgeons, and failed. Dr. F. J. Brown used a differently formed instrument, and succeeded. Craniotomy by Mr. Ely at 11 A.M. Delivery by Dr. F. J. Brown at 4 P.M. Detachment of os uteri before arrival of Dr. F. J. Brown; convulsive agitations during labour, and subsequently the placenta came away in seven minutes. Slight amount of external hæmorrhage; in fifteen minutes post-partum. Alarming syncope set in, and lasted for an hour and a half. Recovered."

The same person; second child.

"Attended by Mr. Steddy, assisted by Dr. F. J. Brown, Nov. 28th, 1872. Labour thirteen hours; child lost, craniotomy, owing to want of pelvic space. There was *no os uteri*. The cervix was closed almost entirely. There was an opening of one line in extent, which admitted a director; this opening was notched by a hernia-knife, and dilated by the finger to the size of a wineglass. The uterus yielded to traction under chloroform. Ergot was given after craniotomy. The placenta came away in five minutes. Recovery."

On the 10th of July, 1874, I was called to the same patient, a midwife being in attendance, who stated that Mrs. T. had been in labour "on and off for forty-eight hours." She was much exhausted, and on examination I found the cervix uteri well dilated, the membranes ruptured, and the cranium presenting. Knowing the case, and being aware from experience on a former occasion that the forceps were useless, I determined at once to perform version. After great difficulty I succeeded in passing my hand into the uterus, seized both feet, and turned. In a short time a full-sized child was extracted. Some difficulty arose in extricating the head (the chin hitching on the pubis); and although the child was in an asphyxiated condition, animation was restored by means of Silvester's process in thirty-five minutes. Placenta came away in ten minutes. The mother and child made an uninterrupted recovery.

I remain, Sir, yours truly,
Chatham, August, 1874. WALTER BUCHANAN, M.R.C.S.E., &c.

THE COMIC ASPECT OF CREMATION.

THE question of burning the dead is exciting much discussion in California. One paper suggests some readings on plates of funeral urns in the future: "Charles Pupker, 3½ lb., cremated July 9th, 1879. For wife of above see third pickle bottle on next shelf. Little Tommy, burnt up September 16th, 1881. Jane Matilda Perkins, October 3rd, 1883. Put up by the Alden Corpse Cremating Company. None genuine without signatures."

EMPHYSEMA OF THE EYELIDS.

To the Editor of THE LANCET.

SIR,—It may interest Dr. Newcombe to learn that the accident he describes is not so uncommon as he supposes. I have seen four cases myself within the last twelve years.—Yours &c.,

CHARLES HILL TAYLOR, M.D., F.R.C.S.,
August, 1874. Surgeon to the Nottingham and Midland Eye Infirmary.

CAIRO.

How is it that Cairo, to which repute gives such a healthy climate, whose situation is so good, and whose air is seemingly so clear and pure, should, according to statistics, yield a higher death-rate than any capital of Europe? The fact becomes the more strange when the death-rate throughout Egypt contrasts favourably with that of many European countries. It is accounted for partly by the number of the natives who, from all districts of the country, from motives of religion among others, go to die at Cairo, and partly by the cold of winter being fatal to the ill-clad natives of Nubia and Soudan, who reside in great numbers there. This view is borne out by the fact that the greatest mortality takes place in the winter months, and that the most numerous deaths are caused by consumption from pulmonary disease. The maladies due to bad drainage, ill-built, ill-ventilated houses, will gradually disappear before the sanitary improvements introduced by the Khedive into the town. The works undertaken with that object are not, however, so well conceived in other cities of his Royal Highness's dominions. At Alexandria a most defective system of drainage was, notwithstanding all his protests, forced upon the engineer, with the result of an undiminished mortality from fever.

Clepsydra, **(Southampton.)—The water-supply of Constantinople is very bad, defective in quantity, and impure in quality. Lake Dercos is proposed as a source of supply; but the Imperial Medical Society of Constantinople have declared in the July number of their official organ, the *Gazette Médicale d'Orient*, that the water is totally unfit for human consumption. Professor Frankland has said as much.**

Dr. Skene, **(Buckhurst Hill.) — We cannot recommend the climate for phthisical cases, except during the winter and spring. Cases of pulmonary phthisis do very badly there during the summer.**

HYDRASTIN IN GONORRHŒA.

To the Editor of THE LANCET.

SIR,—As there are a great many varieties of treatment in gonorrhœa, I beg to offer a few remarks respecting its mode of treatment &c. As far as internal treatment is concerned, I merely give in the first stage a saline aperient, to be continued three times daily for four or five days, together with the following injection:—Hydrastin, one drachm; solution of morphia (Magendie's), two drachms; acacia mucilage to four ounces: to be used three times daily. This I have employed when inflammation ran very high, without even the slightest ill-effects, and have used it in every stage of gonorrhœa with the most beneficial results when every other treatment, both internally and locally, had failed, including red sandal oil. But there is one remark I wish to make regarding the use of injections which medical men generally forget, and that is, to tell their patients to micturate previous to its use. Unless this is done, injections in gonorrhœa are useless. Hydrastin is used very much in different parts of the United States, and very successfully. My last patient was a farmer, who has had a gleety discharge for seven months. His medical man had quite wearied him out with injections &c., all to no purpose. I at once tried the hydrastin, and in two weeks he was quite well. I am, Sir, yours truly,

Chart, Sutton, July 27th, 1874. J. N. BERDIN, L.R.C.S.I., &c.

IRISH WAKES.

So many and curious accidents continually occur at these celebrations over dead bodies that it appears time the Legislature should step in to forbid the ghastly ceremony. Much might be done through the aid and co-operation of the Catholic clergy, who cannot shut their eyes to the facilities offered for contracting and propagating infectious diseases. It is impossible on any grounds to defend the barbarous custom. A wake and its surroundings must be perfectly well known to our readers. A score of men and women assemble in a wretched garret to celebrate in drink and riot what should be a mournful event. Very often the poor remains are desecrated. A pipe is put into the mouth of the corpse, and liquor poured down its throat. In the course of a couple of hours the sympathisers are in that condition which has been described as "problematically pious, but indubitably drunk," and the occasion becomes a wild orgie. Last week, while a wake was held on the remains of an infant in the upper storey of a house in a small street in Dublin, the floor gave way, and the company, about thirty in number, were precipitated to the next floor; this also breaking up, all the people fell to the basement. Several were immediately taken to the hospital, and a few are reported to be fatally injured. If the accident should be the means of putting a stop to the offending practice, it will have done much good.

Columba, **(Barrow-in-Furness.) — An additional argument for cremation comes from Valparaiso, where the Cerro de la Concepcion—the site of a cemetery—has cracked and disclosed the graves. Foul gases have emanated from the disturbed soil, and the remains of coffins and their inmates have had to be subjected to a process of cremation. Why not have had recourse to that process at first?**

Mr. A. Halcorsen. **—We cannot recommend any particular medical school, but advise our correspondent to make the round of the hospitals and schools early in October, and judge for himself.**

HAY FEVER.

To the Editor of THE LANCET.

SIR,—As an annual sufferer from this troublesome malady, allow me to suggest to your correspondents a remedy I have tried this year with perfect success. Acting upon the suggestion in a back number of THE LANCET, I injected the eyes and nostrils three or four times daily with a weak solution (one grain to the ounce) of quinine. On the second day I could go out of doors, though in the middle of the hay season, and in a grass country, without experiencing any unpleasant sensations, and after four or five days was able to give up the treatment. I feel sure a trial of this plan will fully justify its recommendation. I remain, Sir, yours &c.,

Down. Coll., Cambridge, Aug. 11th, 1874. W. B. HURRY.

PROFESSIONAL ETIQUETTE.

To the Editor of THE LANCET.

SIR,—In reference to a correspondence recently published in THE LANCET on the above subject, I think it only just and fair to Dr. Quain to make a statement of facts within my knowledge. I also consider that Dr. Sealy's letters are so worded that they convey a false impression to the reader.

On reference to my books I find that in 1866 I attended at Miss T.'s. In July and August, 1867, I was again in attendance, meeting in consultation Dr. Quain, who had been for many years the confidential friend and medical adviser of Miss T. and her family. In January, 1871, "a personal friend" of Miss T.'s asked my partner, Dr. Graham, to see her, and he continued to attend her for some months. In November of the same year, and again in April, 1872, Dr. Graham was called in and attended. On June 1st, 1874, he was again asked to see Miss T. by an intimate friend of her's, Dr. Quain having expressed an opinion that a severe illness, like the former one in which Dr. Graham had attended her, was impending. Unaware that Dr. Sealy had ever attended Miss T., of course he went as requested, and I maintain has rightly continued his attendance.

Dr. Sealy's name was never mentioned during my visits or my partner's to the house, and we were in ignorance of his ever having been in attendance until the occasion of the present outpouring. Surely Dr. Sealy will make a statement as to when and how he obtained his introduction to Miss T., and give from his books the dates of what he terms "his almost constant attendance on Miss T. or her establishment for years," and explain how neither Dr. Quain nor ourselves knew anything about it.

I am, Sir, yours obediently,

July 22nd, 1874. HENRY JAMES, F.R.C.S.

To the Editor of THE LANCET.

SIR,—Though reluctant to trespass further on your space, I feel that it is due to you even more than to myself that Mr. Keily's letter on the above subject should not be allowed to remain unanswered. I suffered the remarks of Father Glenie in the same direction to pass, because I did not see that his choosing to ignore my position in connexion with Miss T. was any justification of Dr. Quain's conduct. If I had visited that lady for the first time on the occasion when Dr. Quain was summoned, I maintain that he would have been altogether unwarranted in behaving as he did. Moreover, there was nothing very tangible about the Rev. Father's contribution, although I am perfectly certain that he knew me to be a frequent visitor at the house. I cannot, of course, say how it might please him to account for those visits. At the same time it is very difficult to understand why the lady should have displayed such an amount of reticence on the subject to her spiritual adviser.

That the deceased lady's legal adviser is justified in assuming an equal amount of ignorance I cannot for a moment admit. The best proof I can offer of my perfect right to assume the title in dispute is *afforded by my books, which are open to inspection.* For the satisfaction of your readers I will furnish an epitome. In the twelve months antecedent to June 1st, 1874, the date of my dismissal by Dr. Quain, I paid one hundred and eleven visits to Miss T.'s residence, and on each occasion (with half a dozen exceptions) saw the mistress herself. During this period I treated every member of the establishment, save one female domestic, who did not require medical aid, Miss T. herself for five distinct derangements; and in return for the portion of such service rendered in the last half of 1873, Mr. Keily, on February 12th of the present year, was good enough to call at my house *in propriâ personâ*, and pay on behalf of his client £26 17*s.* 6*d.* Can "excess of zeal" have so obscured Mr. K.'s memory? or what other inference could he draw from the bill for professional attendance on Miss T. which he brought with him? This, as set out, purported to apply to her alone, which would not have been the case had it comprehended servants only.

Dr. Quain may well desire "protection from his friends"; for the prolongation of this discussion, which must be anything but agreeable to him, he is solely indebted to them.

In taking leave of the subject, I must not forget to thank you, Sir, for the very candid and vigorous effort you have made to sustain "right against might." I am pleased to think that the generous support you have afforded a general practitioner, entirely unknown to you, has, if I may judge from the numerous communications I have received from correspondents, known and unknown, been fully appreciated by the large body to which I have the honour to belong. I am, Sir, yours &c.,

Weybridge, August 8th, 1874. GEORGE J. SEALY.

*** **The above correspondence, taken in connexion with what has gone before, leaves nothing wanting to enable the profession to form an opinion on the title of Dr. Sealy to be regarded and treated on the 1st of June, 1874, as the usual or frequent medical adviser of Miss T. We think the proof of his title to be so regarded is abundant, and in excess of what any gentleman should be called on to produce. The facts of Mr. James's letter—which would have been published earlier had we got his sanction to publish names—afford confirmatory, though negative, evidence of Dr. Sealy's statement. There are gaps in the attendance of Mr. James and Dr. Graham on Miss T.; notably there is one between April, 1872, and June 1st, 1874, when Dr. Sealy was dismissed, and Mr. James called in. Dr. Quain, in his letter to Dr. Sealy, expressed surprise that the "usual medical attendant" was not in attendance—meaning Dr. Graham; but Mr. James's own letter shows that for more than two years neither he nor Dr. Graham had been in attendance. This explains Dr. Sealy being in attendance. Mr. Keily will probably now perceive that his memory has been much at fault in regard to Dr. Sealy's professional relations with Miss T. We shall not repeat our already expressed views on this case, the correctness of which every additional piece of information confirms. Dr. Sealy lost a patient, on the advice of a physician, whom he was attending and had attended for a length of time. Dr. Quain may have acted on sincere views of what was due to an aged lady; but he owed it to the gentleman whom he knew to be attending to at least institute the fullest inquiry into his position in the family. This he failed to do. Had he done this we believe he would have acted and written very differently. Finally, we must say that, in our opinion, the charge of "writing in a way to convey a false impression" is not applicable to Dr. Sealy, and that he has shown a quietness under the whole circumstances of this case which is highly creditable to him.—ED. L.**

CREMATION IN JAPAN.

THIS custom is not only common in Japan at the present day, but has been so for centuries. Burial in the usual manner is also practised where desired, and among the Shinto sect, whose religion the present Government would like to see universal, it is the rule. Among the Buddhists cremation was till recently quite common; while the Monto sect, one of the most numerous in Japan, nearly always burn their dead, the exceptions being among the upper classes. In certain districts cremation has been the invariable rule, to the absolute exclusion of interment. Whether the custom originated from within or was introduced from without the country is unknown; but the aborigines, as the race called Ainos are held to be, burn not only the body, but the hut and the property of the deceased. An edict of late years forbade cremation; but, like most edicts in Japan, it was honoured more in the breach than the observance. Indeed the Government winks at the smoke from the cremation furnace, in which so large a proportion of the Japanese dead are regularly reduced to ashes.

Psychiatros.—In the statistics of insanity in Scotland it is noticed that the proportion of female recoveries is at all seasons considerably more favourable than that of the male recoveries, with the singular exception (say the Scottish Commissioners) of the month of April.

Voyageur.—Yes. Mungo Park was, like Livingstone, a member of the medical profession. His first voyage, to the East Indies, was in the capacity of ship's surgeon; and after his return from his African expedition in search of the course of the Niger, he married, and practised his calling in Peebles.

MULLINGS *v.* MULLINGS AND FINCH-HATTON.

To the Editor of THE LANCET.

SIR,—My attention has just been drawn to your article with reference to this case in your impression of August 1st. Will you do me the favour to rectify an important omission by stating in your next that the charge against myself was *withdrawn*. The verdict of the jury was that adultery had been committed in Dresden with some person unknown.

I am, Sir, yours faithfully,

Carlton Club, Aug. 6th, 1874. EDWARD H. FINCH-HATTON.

GOITRE IN INDIA.

THIS disease occurs in the Himalayas under conditions quite different from those which have been held to account for it in the Alps. It has been met with at Masúri; at Kalka, at the foot of the Simla Hills; at Simla; at Nirth, a very hot place near Rampúr in the Sutlej valley; at Lippe, a cool place, above 9000 feet high, in Upper Kunawur, with abundance of good water; at Kaelang, in Lahoul, a similar place, but higher; at the Ringdom monastery in Zanskar, about 12000 feet high; in the great open valley of Kashmir; and at Pashâwar in the low-lying trans-Indus plains. These cases do not, in the majority of instances, support any particular theory as to the cause of the disease; while Dr. Bramley has mentioned in the "Transactions of the Medical Society of Calcutta" that he found goitre more prevalent on the crests of high mountains than in the valleys.

Mr. J. P. Balbernie, (Sheffield.)—The Society's address is, we believe, Craven-street, Strand.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Parkes, Bitterne; Dr. Hughlings Jackson, London; Mr. Sydney Jones, London; Mr. John Gay, London; Mr. Rothschild, Paris; Mr. Whittle, Brighton; Dr. Aquilla Smith, Dublin; Mr. Valentine, London; Mr. Sedgwick, London; Mr. Nichols, St. Ives; Mr. Carpenter, London; Mr. J. C. Orchard; Mr. R. James, Clifton; Mr. Bird; Mr. Jephson, Aberdeen; Mr. G. Rennie, Liverpool; Mr. Brooks, Ipswich; Mr. Eversfield, Caterham; Mr. Kendall, Burnham; Mr. Waterson, Peterborough; Dr. Hebblethwaite, Bawtry; Mr. Gregory, Winchelsea; Mr. White, Carlisle; Mr. Roberts, Carnarvon; Dr. Dean, Burnley; Mr. Farling, Ashford; Mr. Rennison, South Shields; Mr. Wickford, Crewe; Mr. Eames, High Beech; Mr. Ward, Birkenhead; Dr. Bell Taylor, Nottingham; Mr. Holloway; Mr. Brazier, Edinburgh; Mr. Skeene, Buckhurst Hill; Mr. Gaylor, Belper; Mr. Cameron M'Dowell, India; Dr. Pierce, Manchester; Mr. Finch-Hatton, London; Dr. Southey; Mr. Faithful, London; Mr. Berry, Wigan; Mr. Elliot, Bristol; Mr. Scott, Kilmarnock; Mr. Rayner, Clevedon; Mr. Metcalfe Holme; Mr. Hurry, Cambridge; Mr. Barr, Ramsgate; Mr. Spratt; Mr. James, Richmond; Mr. W. Buchanan; Dr. Griffiths; Dr. Sealy, Weybridge; Dr. Balbirnie, Sheffield; Mr. Sincock; Mr. Bunn, London; Mr. Woollard, Manchester; Mr. Douglas, Consett, Durham; Mr. Dewe, Perth; Mr. Mason, Glasgow; Dr. Brebner, Dover; Mr. Davis, Derry; Mr. Bond, Ross; Mr. J. Winzar, Salisbury; Mr. Willmore, Queenwood College; Mr. R. Orton, Coventry; Dr. Edis, London; Dr. R. T. Smith; The Military Secretary, India Office; H. J. A.; A Constant Reader; A Student; The Director-General of the Army Medical Department; The Registrar-General, Edinburgh; M.D.; B.A. Oxon.; The Secretary of the College of Surgeons, Edinburgh; &c.

LETTERS, *each with enclosure*, are also acknowledged from — Dr. Lawton, Torquay; Messrs. Bruce and Co., Kidsgrove; Mr. Welch, Dorchester; Mr. Wilson, London; Mr. Dalrymple, Leicester; Mr. Moore, Southwell; Dr. Fairbank, Doncaster; Mr. Stuart, Wigan; A. B. C.; Z.; Bona Fides; Alpha; B. A.; L. M.; M.R.C.S.; Iota; F.R.C.S.; B. H. H.; M.D., Chelsea; M. C.; A. B.; J. P. B.; H. C.; M. B.; K. F. G.

Newcastle Daily Chronicle, Manchester Guardian, Margate and Ramsgate Gazette, Liverpool Daily Post, Leeds Mercury, East London Observer, Wigan Observer, Welshman, Land and Water, Sunday Times, Huddersfield Chronicle, Surrey Advertiser, Cork Constitution, Ulster General Advertiser, Halifax Guardian, Sunderland Times, Berwick Warder, Western Mail, Isle of Man Times, and *Wrexham Guardian* have been received.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments).

THE LANCET OFFICE, AUGUST 13TH, 1874.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Aug. 7	29·95	W.	59	62	99	71	52	...	Overcast
„ 8	29·64	W.	58	62	109	71	53	0·02	Cloudy
„ 10	29·69	W.	58	62	105	70	53	0·08	Cloudy
„ 11	29·79	W.	55	58	105	69	48	0·28	Cloudy
„ 12	29·83	N.W.	52	55	105	68	46	0·05	Cloudy
„ 13	29·56	S.S.W.	59	64	...	...	49	0·16	Rain

Medical Diary for the ensuing Week.

Monday, Aug. 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 18.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 19.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 3 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Thursday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Aug. 20.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Aug. 21.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 22.

HOSPITAL FOR WOMEN Soho-square.—Operations, 9½ A.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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